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THE SELECTION AND TRAINING OF THE BUSINESS EXECUTIVE

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THE

SELECTION AND TRAINING

OF THE

BUSINESS EXECUTIVE

BY

ENOCH BURTON GOWIN

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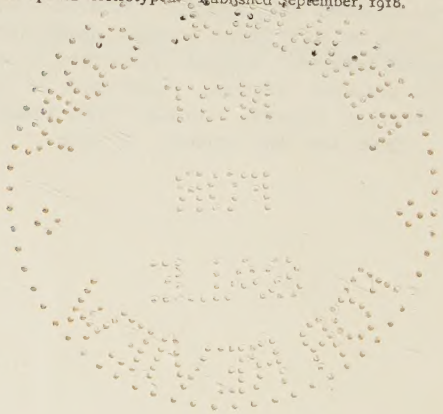

DEDICATED

TO

EMPLOYERS OF THAT FINE TYPE OF WHICH
JOHN H. PATTERSON, HENRY FORD, E. C. SIMMONS
JOHN WANAMAKER, THOMAS EDISON, AND
THEODORE N. VAIL ARE REPRESENTATIVE

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PREFACE

A CERTAIN group of men, representative of big business at its best, recently met in New York to discuss the idea of an American International Corporation which was being evolved in the minds of some of them. It was not the question of finding the money that troubled these capitalists and other men of large affairs, since to them the securing of $50,000,000 was a small matter. But, as a leading member of the group, President Vanderlip of the National City Bank, put it, "how to vitalize the $50,000,000, how to make America a financial and industrial power throughout the world, how to send the American dollars into other lands to open the way for American merchandise—that was the one great problem.

"It was management, not money, that exercised us—brains, practical experience, judgment, vision, energy, plus patriotism. We scanned the whole country in search of the proper man."

From an abundance of experience in dealing with corporations of all sorts, both successful and otherwise, these men recognized the vital connection which exists between efficient management and satisfactory profits. And the necessity which they felt of placing at the helm of their corporation a carefully selected executive is common to all corporations, whether newly organized or going concerns of many years' existence.

The subject which we have here under consideration, consequently, the selection and training of the business executive, is of much concern to all corporation officials, particularly those more directly responsible for the per-

sonnel; and, if the author has achieved reasonably well the purpose intended, the statement of the problems involved therein and the solutions which appear most feasible, even though tentative, should prove helpful to them. While the discussion deals primarily with the corporations popularly known as industrials, it is believed that those concerned with the management of other enterprises, such as public utilities or railroads, will also find in the book something of value.

So far as the author personally is concerned, he feels the more constrained to issue the book now when, the Great War in our midst, of all times we need seriously that high type of democratic efficiency which it is the larger purpose of this study to inculcate. Its message, he trusts, will be of some assistance to managers in their patriotic endeavors now and during the scarcely less stirring era which awaits American business after the war.

It is a pleasure to acknowledge the very real assistance rendered by the considerable number of officials whose questions, suggestions, and information have been freely supplied. Particularly does the author wish to thank the chairman of the Committee on Executive Training of the National Association of Corporation Schools, Mr. Norman Collyer of the Southern Pacific Company, and the President of the National Association of Corporation Schools, Mr. J. W. Dietz of the Western Electric Company, for their encouragement and various helpful criticisms. Mr. William A. Markert, of C. E. Knoppel and Company, has also very kindly submitted several suggestions and criticisms. In the discussion of heredity as a factor in the selection of executives the author owes much to Professor Franklin H. Giddings of Columbia University, Dr. C. B. Davenport, Director, and Mr. H. H. Laughlin, Superintendent, of the Eugenics Record Office, and Professor W. E. Castle of Harvard University. Professor Harry L. Holling-

worth of Columbia University criticised in a constructive way the proposed list of qualities essential to the business executive; Mr. Mark M. Jones, Supervisor of Personnel of Thomas A. Edison, Inc., is to be credited with the excellent diagram of a personnel department shown in the final chapter; and Professor Edward D. Jones of the University of Michigan very obligingly selected the twenty-five leading books dealing with business administration.

E. B. G.

New York, April 15, 1918.

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THE SELECTION AND TRAINING OF THE BUSINESS EXECUTIVE

THE SELECTION AND TRAINING OF THE BUSINESS EXECUTIVE

CHAPTER I

Executive Positions

The executive as he organizes an enterprise, delegates its various duties to subordinates, and supervises their accomplishment of these tasks, functions as a vital center. To him come various questions, proposals of policy, complaints, reports, and other matters of business; and from him issue the directions with which the owners of the enterprise, its employees, and the public are alike concerned. Each of these three groups, should the enterprise be wisely conceived and managed with skill, benefits from his activities, whereas experience has demonstrated that an enterprise which lacks such positive managerial guidance invariably suffers a diminution of its productivity, if not the cessation in bankruptcy of its career as a going concern.[1] Upon the basis merely of adequate return from the corporation's expenditure, we must conclude that the executive in securing for the owners satisfactory dividends, for the workers better wages and working conditions, and for the consumer a superior commodity at lower cost, performs a distinct service.

In order to estimate more accurately these services performed by the executive, they should be viewed in their relation to the size of the business unit or, as it may preferably be termed, the size of the representative firm. At

[1] *Cf.* Ch. II.

any given time there is a certain size of business unit which demonstrates itself to be the most economical, or efficient, producer. Its management has under its control all the land, labor, and capital it can properly utilize, but no more; and the enterprise represents, to use the figure suggested by Professor Marshall, a full-grown tree in a primeval forest surrounded by both aspiring young saplings and overgrown, decaying trees struggling with it for a share of earth and sunlight.[1] The outcome of this struggle for business existence and advantage demonstrates the superiority of the representative firm, which thereby comes to dominate industry.

The representative firm changes in size under what, broadly speaking, we may term the conditions of industrial evolution. While not all businesses are subject to it, the tendency has been in general for the very small establishments to decrease in number, whereas the very large establishments have shown the most rapid rate of gain. The result, the dominancy of industry by large-scale producers, is a fact common to all highly civilized countries.[2]

[1] *Cf. Principles of Economics* (4th ed., London, New York: Macmillan and Company, 1898), pp. 397, 422, 450, 514.

[2] Cf., for example, the statistics cited by Taussig, *Principles of Economics* (New York: The Macmillan Co., 1913), I, ch. 4.

According to the returns of the Thirteenth Census, the number of manufacturing establishments whose annual product is valued at $1,000,000 or over had increased from 1,900 in 1904 to 3,060 in 1909. While these establishments even in the latter year were relatively insignificant in number, comprising only 1.1 per cent of the whole, their product in 1904 represented 38 per cent of the total manufactured product and in 1909 an increase to 43.8 per cent. *Cf.* Vol. VIII, *Manufacturers*, p. 182.

Certain industries exhibit a higher concentration than others. While in 1909 the establishments whose annual product was in each case $1,000,000 or over represented in the brick and tile industry but 4.7 per cent of the total production and in the fur goods industry but 7 per cent, similar percentages for other industries were as follows: Agricultural implements 64.3, automobiles, including bodies and parts, 68.4, petroleum refining 88.0, glucose and starch 89.0, and lead smelting and refining 99.2. *Ibid.*, p. 183.

In his testimony before the Senate Committee on Interstate Commerce, Chairman Davies of the Federal Trade Commission presented statistics to show that 60 per cent of the United States' annual production of 40,000,000 tons of pig iron was produced by twelve companies; that 72 per

The war has accelerated the tendency toward large-scale production and it is believed that the industrial invasion following the war will be undertaken by corporations considerably larger than have been witnessed before.

This expansion in size of the representative firm since the Industrial Revolution late in the eighteenth century has been due to certain advantages which the large-scale enterprise possesses as a producing unit. The more important of these advantages may be thus summarized: [1]

Strategic location of subsidiary plants, agencies or stores, and the adjustment of each unit to its particular field.
Increased use of machinery.
Utilization of by-products.
Superior purchasing.
Wider latitude in choosing the marketing plan.
Saving in cross freights.
Better supervision of credits.
Variety of talent in the management.
New devices perfected by research staffs.
Interchange of ideas and comparative data.
Regularization of production and of prices.
Profits secured in financing the enterprise.

While it is true that any one enterprise could scarcely hope to secure for itself all these advantages, the possibility of deriving substantial benefits from at least some of them affords business managers a strong incentive. In consequence, on the operating side already referred to there has been brought about an increased size of the establishment and on the financial side the growth in the corporate form

cent of the 43,000,000 tons of steel ingots produced annually were made by thirteen companies, although 200 companies were operating in this field; that 62 per cent of the steel bars were produced by eight companies; 89 per cent of the shapes by five companies; and 66 per cent of the plates by seven companies. *Wall Street Journal*, September 21, 1917.

[1] Various lists of these advantages have been prepared; see, for instance, Taussig, *Principles of Economics*, Chapter IV; Seager, *Principles of Economics* (New York: H. Holt & Co., 1913), 166 ff.; and Marshall, *Principles of Economics*, Book IV, Chapter XI. The twelve advantages above specified I have arrived at in the main from a somewhat extensive acquaintance at first hand with corporate enterprises.

of organization. It does not require much investigation of these large-scale enterprises, however, particularly of the corporations formed in such unusual numbers during the years 1898–1900, to realize the weight of the observation that these advantages constitute merely an opportunity, not a guarantee, and that large-scale production is subject to rather definite limitations.[1]

The management, desirous of conducting a business enterprise in such a way that profits will accrue, accordingly seeks to discover and remove these limitations, or at least to expand them somewhat. Investigation, however, reveals the fact that the limitations of the large-scale enterprise are usually a matter of its own organization and management;[2] and the managers in seeking increased profits thus are obliged to study their own science and technique.

The development of better methods in the organization and management of a business comprehends two closely related processes, viz., an increased standardization and an increased division of labor. The various advantages cited of large-scale production, in fact, appear to resolve

[1] A tabulation made by the *Wall Street Journal* and printed in its issue of October 24, 1903, shows that the shrinkage in the market value of one hundred industrial corporations' securities was $1,753,793, a loss of 43.4 per cent from the high prices touched by the various issues during the preceding three years. Cf. also Moody, *The Truth about the Trusts* (New York, Chicago: Moody Publishing Company, 1904), and Dewing, *Corporate Promotions and Reorganizations* (Cambridge: Harvard University Press, 1914).

[2] In Professor Taussig's view, "The limitations on large-scale production arise mainly from the infirmities of human nature. The extension of the scale of operations means an ever increasing reliance upon hired labor and an ever lessening reliance on spontaneous self-interest. If all men worked with as much energy and spirit for an employer as they do for themselves, the spread of large-scale production would be almost without bounds." *Loc. cit.*, p. 55.

While I should be the last to minimize the importance of the interest element specified in Professor Taussig's concluding sentences, it does appear to me that the foregoing quotation, along with numerous others in similar vein which have been made concerning corporate organization and management, is open to criticism. There is a considerable difference in corporate organization and management existing between *wanting to* and *knowing how* and the emphasis which I have seen fit to adopt in the present work is upon the latter of these two factors.

themselves into the two advantages that the large enterprise in comparison with the small does permit more readily a higher degree of standardization and division of labor.

It is the custom among managers to contrast standardization with so-called rule-of-thumb, by which they mean methods such as are hit upon by chance. Standardization represents a more definite development, the aim being to learn the best way of doing things and to render this best way uniform throughout the establishment. Time-study men, systematizers, a research staff, technically trained inspectors, cost accountants, auditors and controllers, are among the specialists more directly concerned in this development and their procedure in arriving at standards serves as a good illustration of the scientific method.[1] The standards when developed are analogous to the laws and principles established by the scientist.

In saying that the large-scale enterprise, in comparison with the small, is better able to utilize such specialists, we deal with one concrete aspect merely of the second general

[1] In order to obtain satisfactory specifications for the materials needed in the plant, the Westinghouse Electric and Manufacturing Company pursues the following plan: "The Materials Section of the Research Division accumulates the necessary information from records, tests, conferences, investigations, personal visits to manufacturing plants, and many times from sad experience.

"In some cases all needed data are obtained within a very short time while again even after years of research complete data are not had. Information once at hand, the specification is written, it is then sent to the interested engineers and others for approval or criticism, then to the Purchasing Department who forwards same to the interested manufacturers for their comments or approval, and finally to the Materials Committee for final approval.

"Performance is essential rather than composition or method of manufacturing and above all else the final results in the use of material must be sought. . . . All specifications to be effective must be kept up to date by constant revision." T. D. Lynch, Research Engineer, "Purchasing Department Specifications," a lecture delivered at the Westinghouse Club, Feb. 26, 1913.

Such procedure is the same in kind as pursued by the biologist or the chemist, although, it may be added, as a rule it is much better organized.

advantage, the division of labor. The large-scale producer, simply because his operations are large, can separate these operations into highly specialized duties, delegating to managers, technical experts, clerical workers, skilled mechanics, laborers and machines, tasks which unseparated in the old-time shop were all performed by a single man, the proprietor. The business, to use a phrase from the Spencerian definition of evolution, passes from an indefinite, incoherent homogeneity to a definite, coherent heterogeneity.

This means that organization has been introduced. There has been an assignment of duties with appropriate lines of authority and responsibility, a schematization which renders the business organization comparable to two huge funnels brought tip to tip, the stockholders at the one extreme and the rank and file at the other being brought into effective relations by the management stationed at the focal point. The accompanying diagram indicates with some detail this view. (See Figure 1.)

Inasmuch as the corporate form of organization has proved superior in several respects to the individual proprietorship or the partnership, it is throughout the present work taken for granted. The stockholders elect the board of directors who in turn elect officers, fixing their salaries and term of tenure subject to such restrictions as the stockholders may have seen fit to specify in the by-laws. These officers and their duties are in general as follows:[1]

The President as a general thing is the most important officer of the corporation. He presides over board meetings, serves as chairman on important committees, binds the corporation in most routine matters, affixes the corporate signature to all documents requiring such signature, exercises a general supervision over all phases of the busi-

[1] Conyngton on *Corporate Organization* (3rd ed., New York: Ronald Press Company, 1905), Ch. XXVII–XXVIII.

ness, and reports his findings to the board and to the stockholders.

The Vice-President performs the functions of the president in the absence, disability, or refusal of the latter to

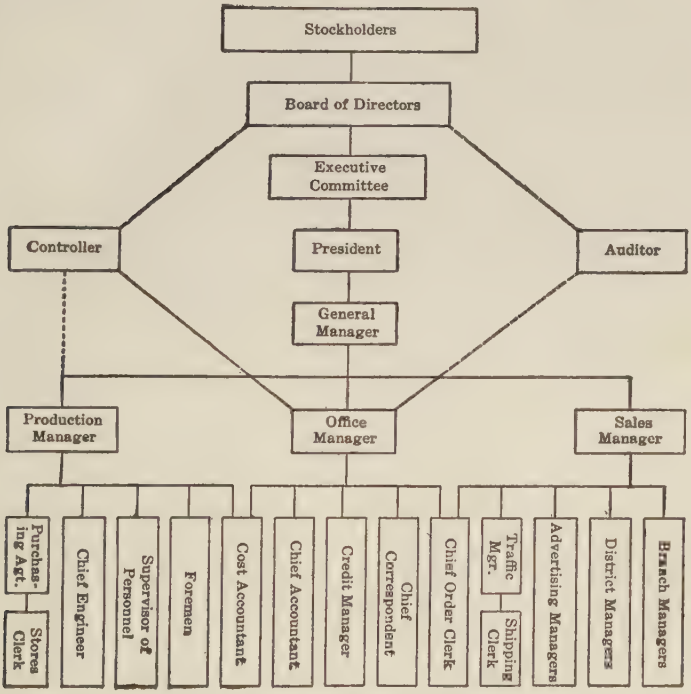


FIG. 1.—An organization chart of a corporation.

act. At times several vice-presidents, designated and ranked as first, second, third and so on are elected, possibly to provide honorary positions for members of the board or to raise certain department heads above the usual confines of their positions.

The Secretary sends out notices of meetings to stockholders and directors, records the proceedings of these

meetings, notifies officers of their election, issues stock certificates, signs or countersigns such corporate instruments as the board may direct, and keeps safely all such corporate instruments and records as do not pertain to the work of the treasurer. Usually he prepares the various state reports required.

The Treasurer has charge of all funds and securities, and he signs checks, endorses negotiable paper and deposits the moneys of the company, under such restrictions as to bonding and countersigning as may be prescribed. In small corporations the treasurer may take actual charge of the details of bookkeeping, whereas in the larger corporations a finance committee takes upon itself many of his duties and responsibilities.

The General Manager is an operating official, engaged primarily in the company's purely business activities and concerned only incidentally with its corporate affairs. While an officer due to his selection by and reporting to the board, he is not so in the same sense as are the others.

The general manager's activities center consequently in three of the four phases of business, financing being under the control of others; viz., producing a commodity, selling it, and recording the transaction. These functions, directed by the production manager, the sales manager, and the office manager respectively, are in turn subdivided into numerous departments, shown in generalized form as per Figure 1. The commodity in its journey from raw materials in some supply house to finished product in possession of the consumer requires either directly or indirectly the attention of designer, purchasing agent, supervisor of personnel, foremen, cost accountant, chief accountant, credit manager, chief correspondent, chief order clerk, traffic manager, advertising manager, district manager, and branch manager.

These department heads in turn employ still further

the division of labor. Although the degree to which this specialization is introduced varies with the particular business and department, the organization in the New York Telephone Company's Advertising Department can

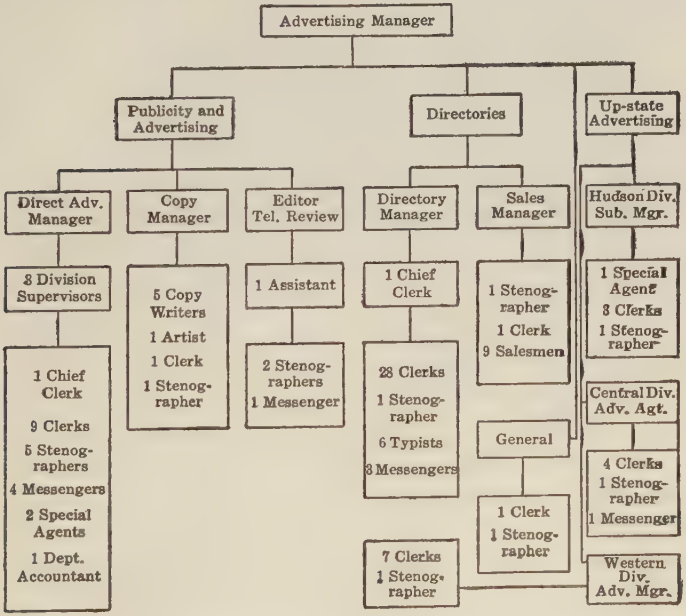


FIG. 2.—The organization chart of an advertising department.

be taken as typical of the general tendency.[1] (See Figure 2.) By means of the two diagrams, Figures 1 and 2, the division of labor can be traced from stockholder to clerk.

In managing an enterprise the stockholders' ideas, which are more or less vague and general, undergo successive modification until they reach the rank and file as specific directions. The different positions through which this

[1] Johnson, "The Organization of An Advertising Department," *Printers' Ink*, March 9, 1916.

process functions is approximately as follows, the advertising department being retained as an illustration: Stockholder—Director—Executive Committee Man—President—General Manager—Sales Manager—Advertising Manager—Division Advertising Manager—Division Supervisor—Chief Clerk—Clerk.

Which of these persons shall be termed executives? It is evident that by employing the term in a very loose way both a small stockholder who has a few words to say at the annual meeting of the board and a clerk who supervises a single typist could be called executives. While this emphasizes the fact that between the two extremes, the small stockholder whose chief function is regarded as the supplying of funds and the subordinate whose worth to the corporation depends upon what he is able to do firsthand at specific tasks, there exist many gradations of the managerial forces before reaching the officials whose worth is measured by what they get done through organized effort, the term executive in this study will be restricted to those grouped reasonably near the pivotal point between stockholders and workmen. These men, comprising the presidents, the general managers, the production managers, the office managers, the sales managers, and the heads of the several departments directly responsible to them, are the executives with those selection and training the following chapters are concerned.

In the evolution of industry, particularly during the past decade, the functions of these men have assumed both an importance and a distinctiveness. Under the growth in size of the business unit and the refinement of the corporate form as a means of securing funds, proprietorship has gradually become more or less completely severed from managership; similarly there has been such an expansion in the numbers of employees and in the complexity of business operations that the average employee can no

longer easily mount into the ranks of authority which of necessity under the new conditions extend tier upon tier above him. The strategic location thus created between these two groups, the owners and the operatives, constituting as it does the pivotal position upon which the needs, the desires, the hopes and the suspicions of both groups are centered, demands for its successful incumbency a greater soundness of knowledge and a much more thorough refinement of managerial technique than men have attained under the old school. These in reality are professional requirements, for which men must be selected and trained.

CHAPTER II

The Asset Value of Executives

In order to carry out its purpose of earning profits, the corporation must have in its possession or, should it be a newly formed organization, must acquire certain assets. These items, such as lands, buildings, machinery, cash, merchandise, notes and accounts receivable, are contributed by the stockholders and it is the theory of the law that against these contributions is to be issued an equivalent in capital liabilities. Such an enterprise, we may say, would be capitalized at its present value; and to the so-called man on the street this seems equitable. Assets to him mean tangible property, capitalization the amount for which this property should sell or, it may be, its cost to replace.

In practice, however, conditions very different from those contemplated by the above theory of the law are found to exist. It may be for one reason or other, perhaps because of its being a close corporation, that the size of the stock issue is a matter of indifference to the owner or owners. In such a case the capitalization is frequently kept low in order to avoid the various charges, such as fees, which a high capitalization would incur, and accordingly is not based on value. Or, as is more often the case, the incorporators issue a capital stock based not upon present but future values. It is evident that under these circumstances much depends upon the accuracy with which these future earnings are estimated, in highly speculative enterprises particularly the divergence between the

estimate and the results later achieved rendering some businesses grossly over-capitalized, some quite as grossly under-capitalized.

In considering these bases of capitalization it should be remembered that presumably the corporation was organized and its shares purchased for the profits which are to be declared as dividends. As a policy year after year these dividends can be paid only from earnings, hence earning power in the last analysis determines what the shares in a particular enterprise are to be worth.

It is found upon investigation that equal earning power can be shown by corporations varying widely in their tangible assets.[1] The same amounts of land, buildings, equipment, raw materials, and other forms of tangible assets as a usual thing, in fact, produce unequal percentages of profits per dollar invested. The practice has in consequence developed of including in the balance sheets of those corporations whose profits in proportion to their tangible assets are above the average certain intangible factors or, as they may be termed, immaterial assets. In arriving at the value of such assets the following plan has often been employed: Preferred stock is issued to the full value of the material assets, and the sum required for the dividends on this preferred stock is deducted from the total net earnings. The remainder of the net earnings is then capitalized at whatever percentage may appear wise and common stock is issued for such amount.

Among the various items which are comprised in immaterial assets corporation accounting has in the main devoted itself to the factor termed good will. This, according to the definition of a leading authotity in accounting, "represents the value of business connections, the value

[1] *Cf.*, for examples, various corporate statistics presented in Moody's *Manual of Railroads and Corporation Securities*, preferably the latest annual edition.

of the probability that present customers will continue to buy in spite of the allurements of competing dealers." [1] If a company because of its well-known trade-mark or special formulæ or old-established location possesses thereby an added earning power, it is entirely legitimate as has long been recognized by the courts and by accountants to capitalize this additional earning power and include it among the assets.[2] In the consideration of immaterial assets, however, it is believed that the usual view is much too narrow, that such items as "patent rights," "franchises," "trade-marks" and "trade names," have been so over-emphasized as to obscure seriously the true rôle of these intangibles.

The germ of every business first existed in the mind of some man as a thought. This thought in the usual processes of business is continually modified and supplemented, until an experience of considerable value comes to be recorded in the firm's office and in its organization. This collected experience in managerial policies and methods, a concrete expression of which is the ability on the part of its executives and other employees to work together with effectiveness, we may term the corporation's larger brain. This larger brain represents an expenditure of time, money, and effort, and its possession or non-possession, it is easy to conceive, affects directly the corporation's earning power.

[1] H. R. Hatfield, *Modern Accounting* (New York: D. Appleton and Co., 1909), p. 107.

[2] In the case of Washburn *v.* National Wall Paper Company the court held: "When an individual or a firm or a corporation has gone on for an unbroken series of years conducting a particular business, and has been so scrupulous in fulfilling every obligation, so careful in maintaining the standard of the goods dealt in, so absolutely fair and honest in all business dealings that customers of the concern have become convinced that their experience in the future will be as satisfactory as it has been in the past, while such customers' good report of their own experience tends continually to bring new customers to the concern there has been produced an element of value quite as important—in some cases, perhaps, far more important—than the plant of machinery with which the business is carried on." 81 Federal Reports, cited by Hatfield, *ibid.*, pp. 107–8.

The discussions of good will, however, as typified by the definition stated above, seem to imply that it is a matter of selling whereas acceptance of the view that the one justification of a valuation of good will is the existence of some transferable right which secures to the purchasers of an enterprise profits in addition to the normal returns on the amount of capital invested in the business [1] would oblige one to conclude that each phase of a business—production, selling, recording or financing—is subject to its influence. Particularly would this appear true of the organization as a whole.

If by assets we refer to those items upon which depend the corporation's earning power, it seems evident that a balance sheet in which the immaterial assets are specified under such heads as patents, trade-marks, or trade names does not set forth adequately the situation as it exists. The executives in charge of particular departments and the way these men with their subordinates are fitted into the organization as a whole, it is quite possible in certain corporations, considerably outweigh such items in respective importance as reflected by earnings. It is believed that such obscurity ought not to persist.

We are faced here with the problem of arriving at a correct valuation of the management. And since the accountant, skilled and conscientious as he may be in establishing the values of the corporation's material assets, can scarcely be held responsible for the accurate appraisal of its human assets, the answer must be sought from the management itself. A number of corporation officials consequently have been asked to estimate the value to the company as an asset of certain department heads. They made replies of which the following are typical:

"We do not find it possible to give the estimate."

"It is practically impossible to estimate the value of

[1] The criterion stated by Hatfield. Cf., *loc. cit.*, p. 111.

the average department head. In our own organization it so happens that the President is the General Manager, and it would be impossible to place an asset value upon him."

"It would be pure guess-work to attempt to answer this question; some new men in coming to us from other concerns in the same line of business, might be superior to the men whom they succeeded."

"I have no idea; I never tried to estimate it."

One official did assume it might be $1,000 since in his company that amount was spent in training the average salesman. The only definite reply, since it does not seem this term should be applied to the answers as above, is that made by a plate glass manufacturer; his estimate was "approximately $20,000." [1]

It would appear from these replies that the respective officers were not accustomed to thinking of the problem in this way.

[1] A leading pump manufacturer, the author has been informed by a labor consultant, estimates the asset value of its company's salesmen as $2,000, as they take a young man into the plant and give him a training which costs them this amount more than he produces for the time being. Deer & Company according to information secured by Boyd Fisher (annals of the American Academy, May, 1916, p. 145) thinks that it costs $1,000 to break in a new foreman.

Norman Collyer of the Southern Pacific Company in a letter to the author suggests that the bonus occasionally paid to attract the services of an especially talented executive should constitute a rough index, not necessarily of his asset value to the employing corporation, but of what the management of that corporation *believes* his asset value will amount to. Similarly the bonus sometimes paid to *retain* the services of the executive should represent the management's appraisal of his asset value.

Mr. Collyer cites the Interstate Commerce Commission Decision No. 6834, July 31st, 1915 (in I. C. C. Reports, Volume XXXVI, pages 48, 49) which contains some interesting testimony in the Rock Island case with respect to bonuses paid to various officers. "One curious item," says Mr. Collyer, " is the special bonus of $450,000 bonds paid to L. F. Loree to induce him to relinquish after ten months' service a five years' contract under which he was to receive a salary of $75,000 per annum and in addition was to be paid a bonus of $500,000 at the expiration of the contract. This apparently is a case where an executive became a liability to be got rid of rather than an asset to be retained."

Let us approach the problem indirectly through a study made by Magnus Alexander of the labor turnover in twelve metal-working factories in 1912.[1] The number of employees on the pay roll at the beginning of the year was 37,274, at the end of the year 43,971. The net increase was thus 6,697, but in order to secure this increase in the working force 42,571 had been hired. It was estimated that one per cent of all employees die annually, four per cent are sick for sufficiently long periods to necessitate their replacement temporarily or permanently, eight per cent withdraw from service for unforeseen or unavoidable reasons or are discharged for justifiable causes, eight per cent are temporarily needed on account of normal fluctuation of production, and eighty per cent constitutes a readily attainable efficiency of an employment department. On the basis of these allowances the engagement of 13,843 additional employees would be justified, which added to the 6,697 increases in the labor force would account for 20,540 of the 42,571 hirings. 22,031 persons were, therefore, engaged above the apparently necessary requirements.

This excess of 22,031 involves several items of expense to the employer: The clerical work in connection with hiring, the instruction of new employees by foremen and assistants, the increased wear and tear of machinery and tools by new employees, the reduced rate of production during the early period of employment, and the increased amount of spoiled work by new employees.[2] These of

[1] Turnover may be defined as the change in personnel brought about by hiring and termination of employment.

The results of this study were first presented by Mr. Alexander in an address before the National Association of Manufacturers, May 26, 1915. See *Reports of Proceedings of Twentieth Annual Convention*. The address has since been delivered elsewhere. *Cf. Annals of the American Academy*, May, 1916, to which articles the following page references refer, pp. 128–144. Mr. Alexander was at the time connected with the General Electric Company.

[2] Mr. Alexander recognizes that these items do not represent the full cost. He also says, "Unquestionably the skill, experience and intelligence of a new

course would be less so far as certain items are concerned in case the new employee was more or less familiar with his duties through a previous connection with the firm, or was engaged for unskilled work. The totals, arrived at in this way, are as follows:

Group [1]	*New Employees*						*Re-Hired Employees*
	Hiring	*Instruction*	*Wear and Tear*	*Reduced Production*	*Spoiled Work*	*Total*	*Total*
A	$0.50	$7.50	$10.00	$20.00	$10.00	$48.00	$10.00
B	.50	15.00	10.00	18.00	15.00	58.50	20.00
C	.50	20.00	10.00	33.00	10.00	73.50	35.00
D	.50	2.00	1.00	5.00	.....	8.50	5.00
E	.50	7.50	1.00	20.00	.....	29.00	10.00

"When these values are multiplied with the number of supposedly and unnecessarily engaged new and re-hired employees in each group," Mr. Alexander concludes, "the result shows that the apparently unnecessary engagement of 22,031 employees within one year in the twelve

employee have much bearing upon the amount of money that needs to be expended for his training. Another important consideration is whether the new employee is working on expensive or low-priced machinery or with high or low-priced tools or on expensive or cheap materials; and to a certain extent whether or not he has been employed before in the same shop and particularly on the same class of work." *Ibid.*, pp. 135–136.

Mr. Boyd Fisher, using Mr. Alexander's study as a basis, has carried the analysis somewhat further in his address before the National Conference of Employment Managers, held at Philadelphia, April, 1917.

[1] In respect to the quality and quantity of the instruction required for the new employee and the effect of the work of new employees upon the economical conduct of the business Mr. Alexander classified the employees into five groups:

"Group A comprises highly skilled mechanics who must have practiced their trade for a number of years in order to attain the required degree of all-around experience and proficiency;

"Group B comprises mechanics of lesser skill and experience who can acquire an average degree of proficiency within a year or two;

"Group C contains the large number of operatives usually known as pieceworkers, who without any previous skill or experience in the particular work can attain fair efficiency within a few months, somewhat depending on the character of the work;

"Group D includes all unskilled productive and expense laborers who can readily be replaced in the course of a few days; and

"Group E is composed of the clerical force in the shops and offices." *Ibid.*, p. 136.

factories under investigation involved an economic waste of $831,000.30. This amount will be considerably greater and will reach $1,000,000 if the decrease of profits due to a reduced production and the increase of expense on account of an enlarged equipment investment are taken into consideration." [1]

Serious as this situation undoubtedly has been found to be it must not be overlooked that the executives of a corporation similarly are subject to this phenomenon of labor turnover, and that these officers in so far as their capacity to affect the weal or woe of their respective companies is concerned are far more important than the classes above considered. In engaging executives the cost is considerably greater than in the case of men for the lower ranks.[2] The instruction involved is much more time consuming and otherwise expensive.[3] The increased wear and tear of machinery and tools by new employees has its counterpart in the increased wear and tear upon the organization brought about by the new executive. It is the *new* manager of all who sets about destroying and rebuilding. The reduced rate of production and the numerous mistakes entailed as a consequence of the new officer's régime certainly as a rule surpass in seriousness the similar effects produced by a minor subordinate of this officer.

These losses as they are usually discussed, however, fail to include what it seems reasonable to regard as the chief factor, viz., the profits that are not made. While the elimination of waste is by no means unimportant, the policy it involves is largely negative whereas the success of the corporation depends in the main upon positive factors such

[1] *Ibid.*, pp. 139–140.
[2] *Cf.* Chs. VI–VII.
[3] This also will be discussed in later chapters. An officer in a leading automobile factory states, "In general we feel that it would take at least a year for a department head to become thoroughly familiar with his duties and even longer than that to become knit into the organization."

as its organization's working under conditions of maximum productivity and the rapid and complete utilization of new opportunities. Accordingly, it is not so much through his mistakes as his inability, due to lack of experience, to grasp

LENGTH OF TENURE OF THE FIRST PRESIDENTS

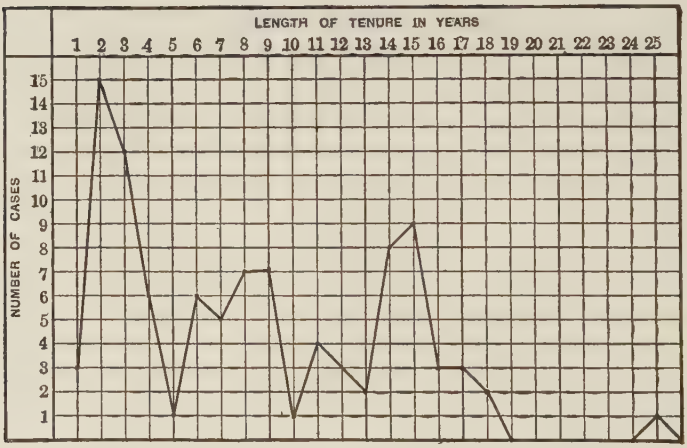


FIG. 3.—The length of tenure of the one hundred men appointed presidents upon the formation of their respective corporations is here shown graphically. The average length of tenure is 8.19 years.

the opportunities his predecessor would and his difference in loyalty and ability to coöperate that the new executive lays the heaviest charge upon his corporation.

It now becomes pertinent to inquire as to the tenure or, in terms of the previous discussion, turnover, of executives. For this purpose the corporations promoted in the main during the late nineties were investigated as to the changes which had taken place in their presidencies from the date of their incorporation to the present time.[1] Data of the

[1] The two lists compiled by John Moody were taken as a basis (see his *Truth about the Trusts*, pp. 453, 467), 305 companies in number. Of these the corporations which had undergone reorganization or for other reasons were not easily traced in the financial manuals were omitted, leaving 100 in all.

sort desired were secured of 100 corporations. The length of tenure of the first presidents of these 100 corporations and of the present presidents is being shown graphically. (See Figures 3 and 4.) The total number of presidents

LENGTH OF TENURE OF THE PRESENT PRESIDENTS

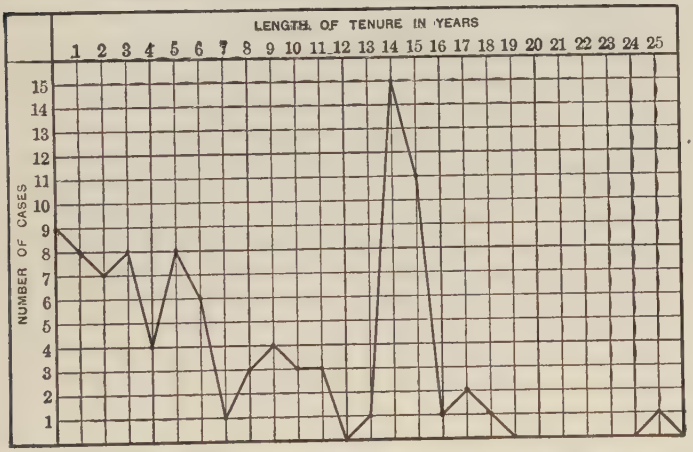


FIG. 4.—The length of tenure of the present one hundred presidents of the same corporations is here shown graphically. Nine presidents had held office less than one year. The average length of tenure is 8.17 years.

identified with these corporations is 235, an average per corporation of 2.35 with an average variation from this number of .90. The average length of tenure is 6.83 years.[1] It should be added that these statistics represent the situation as to tenure too favorably rather than otherwise since of the original 305 corporations from which this list of 100 was compiled data were not secured from those corporations which have dissolved or undergone reorganization or for other reasons were not readily traced in the financial manuals.

[1] From a different source the tenures of five additional corporation presidents have been secured; the average, 6.9 years, agrees closely with the above.

The length of tenure of certain lesser officials of corporations has also been investigated although, as the number of cases in the table indicates, the inquiry has not been of wide scope. These were necessarily secured by individual inquiry and the data secured in this inquiry were not drawn from the same corporations nor do they cover the same period of time. These results are shown in Table I.

TABLE I

LENGTH OF TENURE OF CERTAIN CORPORATION OFFICIALS

Official	*Number of Cases*	*Years tenure in present position*		*Total years with the firm*	
		Average	*Ave. Var.*	*Average*	*Ave. Var.*
Purchasing agent	6	5.4	4.3	18.0	11.8
Factory supt.	6	3.4	2.5	7.2	3.9
Employment agent	2	4.5	2.5	15.5	7.0
Chief accountant	6	3.9	1.4	11.5	7.2
Office manager	2	7.5	1.5	10.7	2.2
Credit manager	4	5.5	1.2	11.7	5.5
Sales manager	7	2.7	2.7	14.2	6.0
Adv. manager	4	2.5	1.0	9.7	5.7
Averages		4.1		12.0	
Estimated averages [1]	2			19.0	
General manager	6	9.6	8.7	11.7	3.5
President	5	6.9	5.2	12.7	10.2

As an aid in determining whether the corporation has lost or gained through the length of tenure shown by these statistics let us consider the executive as an asset subject, as are other assets, to depreciation.[2] In the terminology of accounting, depreciation may be defined as "that part of the original outlay on fixed or circulating assets which has disappeared, either through wear or tear, lapse of time,

[1] Two corporation presidents have given estimates covering all their department heads, the estimates being 18 and 20 years respectively.

[2] This fact is ignored as a rule in the consideration of tenure. See, for in-

or obsolescence;" [1] and it is the practice of all conservative managers in order properly to equalize profits during different years to charge off systematically such amounts as will offset this depreciation. The application of this principle to an executive, however, is qualified in one important respect, that of the probability of his increasing in value. A machine is at its highest point in value shortly after being put into operation but a man under normal conditions should appreciate in value for years. After a time, needless to say, depreciation of the human asset inevitably follows.

The process may be made clearer by diagram. (See Figure 5). The newly appointed officer for the time being, it may be, is worth less than nothing as an asset. At least those responsible have selected him not for the results he may be able to accomplish the first day, the first month, possible the first year or two, but rather in view as to what he can do after the "breaking in" process, be this long or short. The asset value curve accordingly starts low, then rises rapidly as the incumbent cultivates his position with

stance, the following table of "Men Employed by Us" prepared by an official of the John B. Stetson Company:

"MEN EMPLOYED BY US"

"20 years and over	324
"15 years and not 20	230
"10 years and not 15	663
" 7 years and not 10	857
" 5 years and not 7	854
" 2 years and not 3	462
" 1 year and not 2	262
	4,259

"It must be remembered that while we now employ about 4,400 people twenty years ago we only employed about 600 and more than half of these are still in our employ."—Gehris, "Employment Problems of the John B. Stetson Company," *Annals of the American Academy*, May, 1916, p. 159. There has been no attempt made to analyze these statistics.

[1] T. W. Mitchell, *Accounting Principles* (New York: Alexander Hamilton Institute, 1917), p. 297. (*Modern Business*, IX.)

skill and intensity. But the rise after a time becomes less rapid and finally the decline sets in. If the asset value is thought of not as a lump sum but in terms of earning power as being so many y dollars for a given x period of time, we

Appreciation and Depreciation Curve

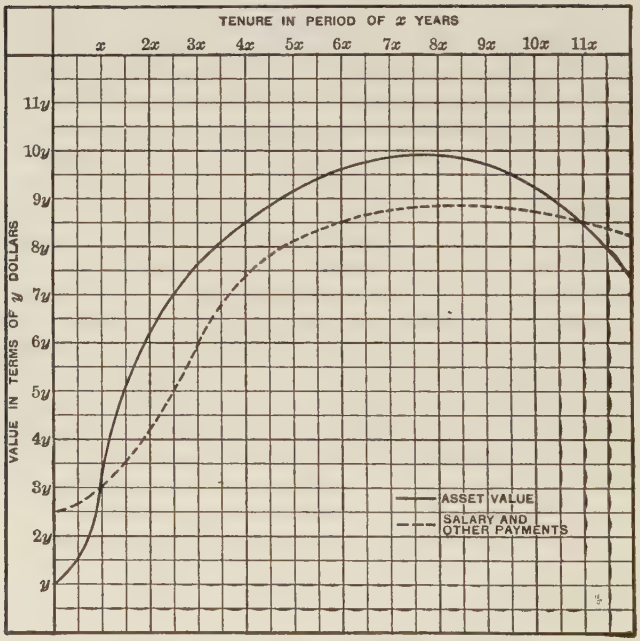


Fig. 5.—It is assumed in the case of the executive whose career is here shown graphically that whereas he is overpaid both at the beginning and the close of his tenure the corporation for many years finds him an asset of value. Needless to say, this is a hypothetical case since the accurate determination of data represented by these two curves is a problem whose importance is not as yet appreciated, much less solved.

may add a second curve representing the compensation paid during the same period. (See Figure 5.)

Were the foregoing statistics on tenure examined in the light of this, as we may term it, curve of appreciation and

depreciation, it seems safe to conclude that these averages indicate lengths of tenure considerably shorter than would be revealed were a man to follow what would be termed his normal career as is shown by the curve; 6.83 years tenure for presidents, 9.6 for general managers, and 4.1 for department heads are terms too brief to be accounted for by a theory of human depreciation in business as we know it in terms of a management buttressed by biology and psychology rather than subject to the vicissitudes of the "hire-and-fire" policy. It is of course true that these averages are of tenures still unterminated and it may be urged that before termination they will have been considerably lengthened. Doubtless there is truth in this contention although the frequency tables from which these averages were computed show that only forty of the one hundred and five presidents [1] and two of the thirty-seven department heads have as yet held their positions over ten years.

Moreover, the tenures of the first presidents are not subject to such qualification, being with the exception of one case terminated (see Figure 3); and it is impossible to reconcile this curve in its skewness with the appreciation and depreciation curve. The decided variation in the number of their presidents shown by corporations organized at approximately the same time (see Figure 6) emphasizes the same conclusion, that causes other than the usual appreciation and depreciation of these men were responsible for the determination of their length of tenures.

The clear recognition of this fact is perhaps the most essential step in the elimination of the wasteful practices themselves, and such recognition apparently develops whenever the causes for corporation success or failure are studied in a penetrating way. Dr. Arthur S. Dewing, who has traced with much care the promotion and reorganiza-

[1] This includes the names drawn from both sources (see footnote, page 21).

tion of a considerable number of corporations, concludes: "I have been impressed throughout by the powerlessness of mere aggregations of capital to hold monopoly. I have been impressed, too, by the tremendous importance of

NUMBER OF PRESIDENTS IN THE HISTORY OF THE COMPANY

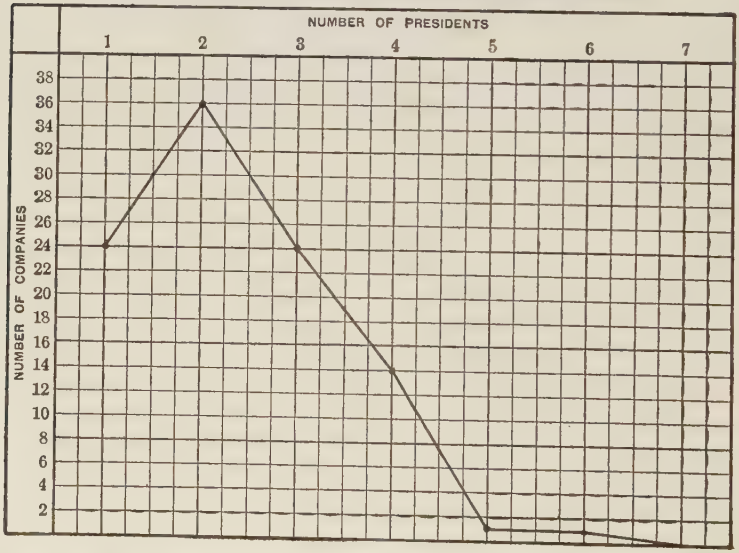


FIG. 6.—The average number of presidents in the history of these same one hundred corporations is 2.35, and the average length of tenure of all the presidents is 6.83 years.

individual, innate ability, or its lack in determining the success or the failure of any enterprise." [1] Mr. Francis Cooper, whose experience in the financing of corporate enterprises is extensive, says that of the three essentials

[1] *Corporate Promotions and Reorganizations*, p. 7. In the same work (pp. 565–6) Dr. Dewing puts it this way: "One at least of two conditions was necessary for the success of a consolidation. It must have had at its command executive ability of an unusual order such that the various human difficulties which beset the administration of a large business were successfully met; or it must have been secured against unrestricted competition through having a monopoly control some essential raw material, some patent, or some franchise. In rare cases only are these conditions realized."

of a successful enterprise—a sound undertaking, sufficient capital, and efficient management—"the author would give good management much the highest place if the matter is to be viewed from the point of actual value to the enterprise. All three are obviously necessary to the best success, but no matter how good the undertaking or how liberal the supply of money all may be ruined by bad management, whereas, even a poor undertaking, or a good undertaking crippled by lack of money, will, unless the handicap be too heavy, be brought to a successful issue by good management." [1] H. L. Gantt, an industrial engineer who in the course of his professional practice has studied with care the operations of a considerable number of enterprises, states: "A wise policy is of more avail than a large plant; good management, than perfect equipment. . . . The factory invariably reflects the manager. The real problem of to-day is, then, how to select and train, or rather how to train and select our industrial leaders." [2]

Our captains of industry have expressed similar views.[3]

[1] *Financing an Enterprise*, I, 42.

[2] *Ibid.*, *Industrial Leadership* (New Haven: Yale University Press, 1916), pp. 12, 13.

[3] A statement often cited is Mr. Carnegie's to the effect that he valued his organization far more highly than he valued his plants, and were he obliged to lose either he would much prefer to part with the plants because they could be replaced more quickly than his organization.

John D. Rockefeller says, although unfortunately the source of this quotation has not been preserved, "I tried to attract only the able men: I have always had as little as possible to do with with dull business men."

The testimony on this point given the United States Industrial Commission (XIII, 135) by Mr. J. M. Waterbury is worth noting since this gentleman as former president of the ambitious but ill-fated National Cordage Company spoke from a wealth of experience:

"Q. (By Mr. Jenks) Do you think there are any other industries besides those that control patents and trade-marks that can make any special savings or economies through combinations?

"J. M. Waterbury. It is largely a question of wonderful executive ability.

"Q. Just as in the individual case?

"A. Yes; here is a man of great executive ability. He can run one plant and make a success of it, or he may be able to run a combination success-

These general statements, while they afford the opinion of experts that a close correlation exists between a corporation's profits and the efficiency of its management, do not provide a very definite basis for the determination of the executive's asset value. For this purpose it consequently appears preferable to (a) estimate as accurately as the conditions of managerial technique now permits the profits which the corporation derives each year from a given executive; (b) capitalize this sum at the current rate of interest; and (c) test the asset value thus obtained according to the appreciation and depreciation principle described above.

The appreciation and depreciation with which the corporation is interested does not concern the executive as an individual primarily but his productivity in those managerial policies and methods which compose what we have termed the corporation's larger brain and which directly affects its earning power.[1] The fact that such policies and methods can be externalized in such a way within the company that they may be transferred to a purchaser, irrespective of the personalities involved in their original production, justifies their inclusion, under the term good will, among the assets. That with which we have here to do, accordingly, is not a *life* curve but a *business career* curve of appreciation and depreciation.

Nevertheless, under ideal conditions there will be a con-

fully. Other people might try to get a number of plants going, get them together, and make a failure of it. It depends upon executive ability. To run a number of plants together is very difficult, and takes a high order of intellect to do it successfully."

Says Charles M. Schwab, of the Bethlehem Steel Corporation: "There are more jobs for forceful men than there are forceful men to fill them. Whenever the question comes up of buying new works we never consider whether we can make the works pay. That is a foregone conclusion if we can get the right man to manage them." *Ibid., Succeeding With What you Have* (New York: The Century Company, 1917), p. 25.

[1] *Cf.* also Ch. XI.

siderably greater correspondence between these two factors than prevails to-day. The president, for instance, who has been selected and trained according to the proper methods and is so rewarded that he becomes willing to give up his best toward the upbuilding of the corporation's managerial brain will not be exploited and ready for the discard in less than nine years. It is for this reason that in the following pages the developing of managerial assets is commonly spoken of as a matter of developing executives, since the means described for their selection, training, and rewarding will, it is believed, bring about a close correspondence between individual valuations and managerial valuations to the firm.

It is agreed that under the conditions of managerial technique now existing a valuation considerably less accurate than the appraisals of the corporation's real estate, machinery, or even the good will inhering in its trade-mark, will likely be secured. Nevertheless these latter appraisals are in reality only estimates, rendered reasonably accurate through a prolonged development of the appraising methodology. In view of the important connection existing between a corporation's profits and its managerial staff, can it be that the problem of appraisal will long be ignored because of undeveloped method? It is believed not.

The balance sheet and the more or less detailed treasurer's report upon which it is based will, it is here predicted, be so broadened in the future as to include appraisals of the corporation's executive assets. While it is difficult no doubt to reduce to definite terms the worth of an executive, the items comprising the inventory being in the main psychical, the procedure which appears most feasible is the expression of such items in more readily apprehended terms. Accordingly we may expect to find the annual report supplemented by information answering questions such as the following:

Length of Tenure

How long have the present executives occupied their positions? Been connected with the company in some capacity?

Are many or few new executives being engaged?

What is revealed by a study of the executives who have severed their connection with the firm?

Methods of Selection

Are the best possible grades of applicants secured, or is dependence placed upon whoever applies?

Are the best applicants selected? By what means is this result tested?

To what extent does each executive hold the position for which he is best fitted?

Methods of Training

Have the best methods of management been developed by the staff?

Are newly-elected executives trained for the performance of their duties, or are they left to learn as they can?

What is the cost of such training? or of such non-training?

Expense of Management

Upon what unit basis should this establishment estimate its expense of management?

What is the present unit cost of management? How does it compare with similar establishments?

Would an increased expenditure for purposes of management prove more or less profitable than were the same sum expended in other ways?

Remuneration

Are the executives now overpaid or underpaid? How is this being determined?

What has been produced by the various executives?

Do the methods of remuneration in use stimulate increased productivity?

Service or Welfare Methods

Do the executives work under proper conditions of light, heat, and ventilation?

Are the executives supplied with the office equipment, clerical assistance, and freedom from minor interruptions which favor increased productivity?

Have the executives, due to their connection with the company, undertaken any social or civic work outside of business hours?

Esprit de corps

Are the executives in harmonious co-operation?

Do they value and steadily cultivate *esprit de corps* among the employees?

Have the executives an interest in the business as theirs, or are they ready at any time to go elsewhere whenever a larger salary is offered?

Asset Value

What is the estimated asset value of the present managerial staff?

How nearly does this value represent their maximum effectiveness?

Are the valuable men or the incompetents being eliminated from the organization?

By what systematic means are the corporation assets in its executives being increased and conserved?

This outline represents roughly certain elements in the inventory of a corporation's executives, which, refined constantly as the technique of management develops, will eventually become able to render a reasonably accurate appraisal.[1] Such appraisal in itself will go far to insure among those directing our corporations this the correct point of view, that executives are assets of value which like assets in general should be effectively utilized.

Certain detailed means through which such effective utilization can be made operative within a corporation will next be examined.

[1] This problem will be considered in later chapters. *Cf.*, especially, ch. XI.

CHAPTER III

The Essential Qualities of an Executive

In order to increase the effectiveness of their executives business concerns have adopted a considerable variety of plans, with a result that whereas some firms (and, be it granted, very successful firms at times) claim to have found in the manner of compensation their solution other firms just as consistently believe that loyalty or careful training or any one of many additional factors has been responsible for the success which they enjoy. Such claims will be critically examined later,[1] but at this point we may anticipate to the extent of saying that for increasing the effectiveness of the firm's executives a program rather than any one method is to be desired.

We are now to consider certain factors of which such a program is composed, the one for immediate attention being selection. It is recognized as a preliminary that a candidate for a position and the position itself are both highly complex; hence the well-worn phrase of fitting round pegs into square holes or *vice versa*, as a matter of fact represents the situation only in a simple and naïve way. It were more accurate to liken the selection problem to the seeking of the combination necessary for opening some bank safe protected by an intricate lock, the qualification being that whereas the safe cannot be opened at all save by the one correct combination the selection problem admits of solutions of all possible degrees of correctness.

In seeking to fit men into positions much depends, it is

[1] *Cf.* ch. X and XII.

evident, upon the accuracy and completeness with which both the position and the person are analyzed. The spirit and program of scientific management during recent years have incited business men to attempt such analyses, the general object being to standardize the process of selection and a very common result being what is termed written specifications for hiring. As examples of the analyses of particular positions, since this is what such specifications really are, we may examine the following:

FOREMAN

"Department X—Section X

"Ideal: all Foremen

"Dependable, willing, competent man who can strike best practicable adjustment between the factors of maximum production, minimum time, most efficient motion, least effort, best quality and promote 'Spirit of the Hive' by reciprocity, coöperation and mutuality." [1]

PURCHASING AGENT

"He should have good judgment, be well balanced, shrewd, cautious, and well fortified with the knowledge which he can scientifically accumulate. . . . Shrewdness is essential to the purchasing agent and tactfulness will help him over many rough places and assist in the consumption of many advantageous transactions. . . . It is axiomatic that the man in charge of these purchases must be tactful and diplomatic in his dealings with the other men interested and in addition he must to attain the best bargains possess good business training and be a keen student of market values." [2]

[1] Specifications used by the Detroit Steel Products Company. *Cf.*, R. J. Burke, "Written Specifications for Hiring," *Annals of the American Academy of Social and Political Science*, May, 1916, pp. 176–181.

[2] Specifications enumerated by H. B. Twyford. *Cf. ibid.*, *Purchasing* (New York: D. Van Nostrand Company, 1915), pp. 26, 27, 29.

EXECUTIVE (In Department Store)

"Organizer:

Ability to detect weak points in the present organization.

Ability to look ahead and provide for future needs.

Ability to locate and build resources for securing employees of a better type than the average applicant.

"Analyst:

Ability to judge men with limited opportunity, as in engaging new men with more favorable opportunity than men already with the firm.

Ability to recognize limitations of men.

Ability to recognize possibilities of men.

"Executive:

Qualities of leadership.

Ability to handle men, to secure loyal service and the best ability of each.

Handling the forces to the greatest advantage for efficient and economic service.

Initiative.

"Educator:

Ability to provide training for people of promise for positions of larger responsibility.

Ability to provide that each person shall be personally equipped with a thorough knowledge of the duties of his position.

"Education:

Sufficient to enable him to meet intelligent men on an equal footing.

Sufficient to make him a trained thinker.

Sufficient to make him successful by the use of his mental equipment, combined with hard work.

"Experience:

Of an executive nature; preferably in a large organiza-

tion in a capacity where he has been responsible for results of his own ability as an organizer.

"Character; Personality:" [1]

Analyses such as these, it is evident, are really neither accurate nor complete; in any technical sense of the term they cannot rightly be called scientific. Moreover, such incomplete and inaccurate analyses represent with fair adequacy the status of the selection problem in this respect since no psychologist, not even those who have devoted considerable attention to the matter, has as yet satisfactorily analyzed any occupation.[2] At the present time the analysis of positions must be regarded as a hope in process of fulfillment.

If the position, which of the two factors is the more tangible, has proved difficult to analyze it may be assumed at once that the analysis of the candidate has even less fully been worked out. The business man has found human nature quite elusive and he has accordingly fallen back upon some rather vague and general terms in his discussions of it.[3] The psychologist has labored with considerable

[1] Specifications used by the William Filene's Sons Company, a department store of Boston. Cited by J. W. Fisk, *Retail Selling* (New York, London: Harper and Brothers, 1916), pp. 257–258.

[2] In speaking of tests which may be useful in the selection of individuals for certain occupations, Professor G. M. Whipple, whose two-volumed text entitled *Mental and Physical Tests* is a standard work on this subject, says, "The attempts in this direction have been so academic and theoretical in character as to make little impression upon the hard-headed man of business, or even upon the expert's colleagues." *Annals of the American Academy*, May, 1916, p. 196.

[3] James Logan, the general manager of the United States Envelope Company, presents the problem faced by the business man as follows: "I suggest that our immediate problem is the problem of showing greater understanding of the human element in business when working with our help. This has always been as difficult a problem as any in business; to-day, for reasons which I have explained, I think it is the most important problem, barring none.

"Now just how is this problem to be solved? What are some of the knacks to remember when dealing with our help? These are not easy questions to answer. It is true that most of the problems which we have to solve are human problems, but there are scores of varieties of human nature and our

success, it would seem, in developing a science of mind, but the application of this science to the problem of selection, particularly to the selection of executives, has not progressed very far although certain of its methods have in them much of promise.[1]

In devising tests for purposes of selection much depends upon the kind of work under consideration as to the difficulties to be encountered. It has been found in cases where technical conditions assume high importance, as in typing, telephoning, telegraphing, machining and allied occupations, that the duties can either be analyzed into their psychological elements and the individuals tested with regard to those elementary functions or those technical demands in the position can be reconstructed in miniature and the subject brought into situations which are models of their real work.[2] But when technical conditions are

constant contact with human problems does not help us so much as it might otherwise. Moreover, a larger number of these varieties of human nature are represented in the average store or factory, so we encounter the problem at practically every turn.

"It is the easiest thing in the world to recognize the man who has unusual ability for handling men, but the hardest thing in the world to define his methods. To deal with men in trying business situations calls for patience, and for judgment and for tact, and also for a lot of things which the best of us can not learn from books. You can see the effects of this knack of working with men smoothly, but for the life of you you can't put your finger on it." *Ibid.*, "Men—the Biggest Problem in Business," *System*, December, 1916.

[1] Professor Hollingworth, a recognized authority in this field, says in commenting upon psychographic accounts of the personality of genius, "It is true that these psychographic methods do not yet yield results which are sufficient to inform us why the particular individuals examined were so much more successful in their work than were others who seem to have been equally favored and equally dilligent. Nor have they yet revealed in any adequate way the nature or degree of the qualifications requisite for success in the vocations from which the representative men have been selected. Nevertheless the individual psychograph constitutes a suggestive method of research for the vocational psychology of the future. It represents the intensive development of the older type of 'biography,' based on direct observational data rather than on hearsay, conjecture and anecdote." *Ibid.*, *Vocational Psychology* (New York: D. Appleton and Co., 1916), pp. 88–89.

[2] Münsterburg's study of motormen is an example of the latter pro-

eliminated, as is largely the case with commercial work, it is found that the tests devised so far have been confined in the main to the grading of subjects in what may be called general intelligence. Yet general intelligence does not suffice as a test when it is desired to select men for specialized positions in business. There are presumably different kinds of intelligence, which enable one man to display a superior intelligence with respect to promotion, another with respect to salesmanship, and a third in executive work. What is needed are simple tests for detecting such differentiation. This is a problem upon which psychologists are interested to work, but they are much retarded by the little attention so far devoted to the matter by men in business. The psychologist and the practical man are thus in general too far apart for an intelligent coöperation to take place.

The sensing of the situation in this way has induced the author to undertake the investigation whose results are to be presented later in this chapter. The need seemed to be for someone to assist in clearing the field in order that a more intelligent coöperation could be secured between business man and psychologist, and this in connection with one narrow phase only of the general selection problem the author has sought to do.

In the selection of executives as business men now conduct the process there is danger that candidates be accepted or rejected on the basis of what after all, so far as the major requirements of the position are concerned, may be nonessentials. It is accordingly something in the main to be commended that managers and others in thinking over the requirements of certain positions have come to draw up more or less definite lists of qualities. These qualities as they have been employed have served the purpose

cedure. *Cf.* his *Psychology and Industrial Efficiency* (Boston: Houghton Mifflin Company, 1913), pp. 63 ff.

of useful concepts. Let us examine several of these lists of so-called essential qualities for success as a business executive. (See Table II.)

In preparing a list of qualities, of which these six shown in the accompanying table can be taken as typical, one serious difficulty lies in securing what may be termed fundamental traits. The list is very likely along with its fundamental or unit traits to contain compounds, and the presence of these compounds, in turn, possibly will result in much overlapping.[1] Accordingly a logical schemetization of the human nature *ensemble* is well-nigh impossible.[2]

The list of qualities which is here presented has been prepared according to the view that human nature is a composite entity whose respective components, to employ the analogy of a mountain chain, arise from it not as isolated peaks but as separate eminences whose bases blend. As the names for the qualities which possess a certain distinctiveness though their bases are inextricably confused

[1] Both these criticisms, it seems, apply to the list of qualities characteristic of the men of science prepared by Professor Cattell. Twenty-four traits were enumerated as follows:

Physical Health	Reasonableness
Mental Balance	Clearness
Intellect	Independence
Emotions	Coöperativeness
Will	Unselfishness
Quickness	Kindliness
Intensity	Cheerfulness
Breadth	Refinement
Energy	Integrity
Judgment	Courage
Originality	Efficiency
Perseverance	Leadership

Cited by Hollingworth, *Vocational Psychology*, p. 127.

[2] At the present stage of our knowledge of human nature, a complete and logically accurate classification cannot be made. The author had been for some time in grave doubt as to the feasibility of preparing a list of qualities which was destined inevitably to be inaccurate and perhaps should not have made the present attempt had he not pondered over the list by Professor Cattell just cited. The inclusion in this list prepared by an eminent psychologist of the three terms intellect, emotions and will, for example, appears to the author as a yielding to the exigencies of the situation fully as complete as he himself would be obliged to do. Hence the present list was prepared.

in the depths of human nature, the following terms have been chosen. Explanatory terms have also been included in order to render clearer the meaning which has been attached to the qualities. (See Table III.)[1]

TABLE II

THE ESSENTIAL QUALITIES OF AN EXECUTIVE AS LISTED BY THE FOLLOWING PERSONS [2]

Dean J. F. Johnson	Frederick W. Taylor
Decision	Good health
Expert knowledge	Brains
Judgment	Honesty
Self-reliance	Special or technical knowledge
Patience and grit	Grit
Concentration	Energy
Enthusiasm	Tact
Imagination	Judgment or common sense
Executive ability	Education
Hugh Chalmers	**H. Gordon Selfridge**
Health	Energy
Honesty	Punctuality
Ability	Methodicalness
Knowledge	Promptness
Initiative	Sense of justice
Industry	Open-mindedness
Tact	Alertness
Open-mindedness	Openness to conviction
Sincerity	Generosity
Enthusiasm	Logicalness
	Initiative
	Calmness
	Resolution
	Manners
	Judgment
	Imagination

[1] In the preparation of this list the author has received some valuable suggestions from Professor Harry L. Hollingworth of Columbia University, Professor James E. Lough of New York University, Secretary Ralph G. Wells of the Boston Employment Managers Association, Mr. H. J. Gardner, Employment Manager of Cheney Brothers, Mr. James Madden, Employment manager of the Charles William stores, and Mr. W. F. Kemble, Labor Standardizer.

[2] Dean Johnson has for many years been head of the New York University, School of Commerce, Accounts and Finance. Frederick W. Taylor is commonly conceded to be the father of scientific management. Hugh

TABLE III

INITIATIVE
(Alertness, imagination, originality, independence in thinking.)
AGGRESSIVENESS
(Energy, courage, domination by will.)
COÖPERATIVENESS
(Unselfishness, kindness, cheerfulness, tact, loyalty.)
PERSEVERANCE
(Industry, ambition, concentration.)
JUDGMENT
(Reasoning ability, accuracy in conclusions, ability to profit by experience.)
COMPETITIVENESS
(Interest in playing the business game.)
HEALTH
(Bodily vigor, good sight, hearing, etc., included.)
APPEARANCE
(Well-groomed appearance, good carriage, pleasing facial expression, voice, etc.)
REFINEMENT
(Courtesy, manners, general culture.)
INTEGRITY
(Truthfulness, honesty, sincerity.)
ORGANIZING ABILITY
(Systematizing, classifying according to functions, planning and delegating.)
CONTROL OF EMOTIONS
(Freedom from outbursts of anger or touchiness.)
SENSE OF HUMOR
OPEN-MINDEDNESS
(Reasonableness, teachableness, openness to new ideas.)

It will not be at all necessary, we presume, to discuss in turn the importance of these various qualities nor to illustrate how each operates in the executive's work. Not a quality, it may be safely assumed, but what in any gathering of executives would have its adherents, each ready to illustrate by some concrete case drawn from his own experience how the possession or the lack of the quality specified proved decisive in some of business' crucial tests.[1]

Chalmers is the founder of the Chalmers Motor Car Company, and was formerly vice-president of the National Cash Register Company. H. Gordon Selfridge is a leading merchant in London and was formerly the merchandise manager of Marshall Field and Company.

[1] The following from a journalist illustrates this very nicely: "To accomplish the great things in life one must have that qualification which, in our inadequate phraseology, is best expressed by the word 'vision.' When you meet a person with true vision you are in the presence of a superman, and

In fact, practically every good quality imaginable has had its claims at one time or another presented by its respective adherents. The list of qualities if allowed to be thus augmented would become interminably long and at the same time quite useless for purposes of selection. What is needed here is a ranking of qualities according to their importance, since the problem at hand concerns neither an absolutely essential quality nor one absolutely nonessential but simply the qualities which are relatively essential. If this degree of relativity could then be expressed in quantitative terms we might well have a very helpful list of qualities.

The investigation now to be described has had this for its chief purpose. The qualities were printed upon a card on the top of which appeared these instructions: [1]

QUALITIES FOR THE RATING OF THE BUSINESS EXECUTIVE
(Education and Experience as Such Omitted.)

Please rank as first, second, third, etc., the following fourteen qualities in what you regard as the order of their importance.

At the left a marginal space was left for the rankings.[2] These cards were then presented to the following groups of persons for rating:

you soon realize it. Mr. Durant looked down the lane of years, saw—and saw rightly. Vision, belief and courage—these are the three cardinal qualities which produce the Rockefellers, the Carnegies, Harrimans and Durants. There is no stopping such a combination of attributes." B. Powers, "William C. Durant," *Magazine of Wall Street*, Oct. 28, 1916, p. 78.

In his *Empire of Business* (New York: Doubleday, Page and Co., 1902), p. 88, Mr. Carnegie, whose success has been specified as due to vision, belief, and courage, says, however, "There is not anything better than a good laugh. I attribute most of my success in life to the fact that, as my partners often say, trouble runs off my back like water from a duck."

[1] Education and experience as such were omitted because what was wanted was a statement of the relative importance of the respective qualities uncomplicated by the problem of how such qualities are attained.

[2] In order to avoid the possibility that those filling out the cards be unconsciously influenced by the relative positions of the qualities as printed on the card, the printer was instructed to print in the order shown by copy one-third the number required, then shift the type for the printing of the second third, following which the type was again shifted for the printing of the remaining cards.

SALESMANAGERS.—These men have charge of sales departments in many of our largest and best known firms. They are presumably the leading salesmanagers in the United States and they were asked to rank the given qualities as an answer to this question, What qualities are most important in enabling a man to make good as salesmanager?

ADVERTISING MANAGERS.—If the word advertising be substituted for sales, the above explanation applies to this group equally as well. The men comprising this group are leading advertising managers and they were asked to rank the qualities from the viewpoint of their specialty.

GENERAL MANAGERS.—Practically the same applies to this group. These men are leading general managers and they were requested to rank the qualities from the viewpoint of this position.

PURCHASING AGENTS, AUDITORS, and TREASURERS.—So meager were the returns received from these groups that very little can be determined from them, but at any rate each man was asked to consider the rating from the viewpoint of his specialty.

LESSER EXECUTIVES.—The above groups were drawn exclusively from large corporations. But certain local executives connected with firms of small or only moderate size expressed an interest in filling out this card and their offer was very gladly accepted. These men (who were only a few in number) ranked the qualities as they believed the business man in general should possess them.

YOUNG BUSINESS MEN.—The blanks were submitted to four groups of young men whose opinions on account of the experience these young men had had in business and their interest in studying it as a science were regarded as valuable.[1] Three of these groups in rating the qualities,

[1] These young men composed the membership of the following classes in the New York University, School of Commerce, Accounts and Finance: Business Administration, Labor Management, Practical Economic Problems, and Retail Store Management, during the academic year 1916–1917.

had in mind the requirements for the presidency of an industrial corporation, the fourth that of the head of a department store.

Members of Employment Managers' Associations.—The purpose of the employment managers' associations which have been formed in various cities is to discuss the problems connected with employment, the best methods for the selection, training and management of employees as revealed by the experiences of executives and others in charge of the personnel work of large commercial and industrial establishments. Members of the Boston, Chicago, Philadelphia and New York Associations have been interested to rank these qualities, the viewpoint in each case being that of the presidency of a large industrial corporation, and their ratings should have special value since in such a problem as this these men possess the views of an expert.

The rankings received from the members of the above groups have been tabulated and, although the results group by group will be considered in Chapter VII, the general averages will now be presented. (See Table IV.) It is believed that this constitutes the most definite answer now available to the question, What are the essential qualities of a business executive?

The courses were being studied in the evening and those attending were almost without exception engaged in business during the day.

TABLE IV

QUALITIES FOR THE RATING OF THE BUSINESS EXECUTIVE

(Education and experience as such omitted)
As ranked by two hundred seventy-six business men

Order determined by average rank	*Quality*	*Average rank assigned*
1	Judgment (Reasoning ability, accuracy in conclusions, ability to profit by experience.)	3.21
2	Initiative (Alertness, imagination, originality, independence in thinking.)	4.30
3	Integrity (Truthfulness, honesty, sincerity.)	4.58
4	Organizing Ability (Systematizing, classifying according to functions, planning and delegating.)	4.71
5	Health (Bodily vigor, good sight, hearing, etc., included.)	5.98
6	Perseverance (Industry, ambition, concentration.)	6.40
7	Aggressiveness (Energy, courage, domination by will.)	6.83
8	Open-mindedness (Reasonableness, teachableness, openness to new ideas.)	7.09
9	Coöperativeness (Unselfishness, kindness, cheerfulness, tact, loyalty.)	7.97
10	Competitiveness (Interest in playing the business game.)	9.60
11	Control of Emotions (Freedom from outbursts of anger or touchiness.)	9.81
12	Refinement (Courtesy, manners, general culture.)	10.30
13	Appearance (Well-groomed appearance, good carriage, pleasing facial expression, voice, etc.)	10.51
14	Sense of Humor	12.26

CHAPTER IV

Nature and Nurture

The selection of an executive, involving as it does an analysis of the candidate and the position sought together with a mutual adjustment of the components of each, we may compare with the operation of a large telephone exchange in which the exceedingly numerous incoming and outgoing calls are brought into proper connection. The official who, according to the story well known to employment managers, refused to engage a certain accountant because the latter wore rubber heels, it being the said official's experience that men wearing rubber heels were dishonest, illustrates the danger inherent in the selection process, viz., the making of a wrong connection. Similarly we may dispose of not a few legends as to how squints and bumps and voice fibers show inventive ability, veneration, persistence, etc., or their absence. In the main, such views represent chance, not causal, connection.

The methods of selection which we seek are those by means of which reasonably accurate causal relations can be established between candidate and position. The apparent simplicity of the problem as thus stated should not deceive us as to its extreme complexity and to the fact that its final and complete solution doubtless will never be attained. Inasmuch as this is the case, our problem at present is one of improving the methods of selecting executives now in use. It is believed that, while complete and in all respects accurate causal connections between candidate and position cannot be made, an attempt to in-

crease the accuracy of these connections is entirely feasible.

Of the several methods which are to be considered in these chapters we have here to do with heredity as a factor in the selection process. Heredity, as J. Arthur Thomson defines it, is "a convenient term for the genetic relation between successive generations, and inheritance includes all that the organism is or has to start with in virtue of its hereditary relation." [2] The consideration of an applicant's heredity thus lengthens by far the range of the prospective employer's data concerning him and, provided these data are trustworthy and intelligently used, it should by that fact make for increased accuracy.

The genetic relation between successive generations does not fully account for any creature, much less a highly cultivated mind; the fertilized egg-cell is to be regarded as a rudiment which for its realization requires an environment supplying food and oxygen and liberating stimuli of many kinds. [2] Nature and nurture necessarily coöperate. Nevertheless, it would appear from the foregoing list of essential qualities that executive capacity is relatively nonspecialized. Judgment, initiative, integrity, organizing ability and health, the qualities which ranked highest, indicate that in comparison with a mechanical or a technical man the business executive is broadly rather than narrowly qualified.[3] Is it not possible, therefore, that for him, less dependent as he is upon technical knowledge and skill, the equipment gained through hereditary relations has a superior value? It is believed that such is the case.

It is a condition of mental development, to mention a further point in which the value of hereditary equipment is emphasized, that one's acquired qualities or character-

[1] *Heredity* (London: J. Murray, 1908), p. 6.
[2] Thomson, *ibid.*, p. 6.
[3] *Cf.* Chap. VIII.

istics are less firmly held than his natural endowments. Hence under conditions of stress the person whose acquirements are more or less artificial runs greater risk of breaking down than one whose qualities, all other things being equal, hark back to a more distant past. In terms of the man on the street, it is said the former person lacks "class." [1] Since the executive necessarily is under heavy responsibility and obliged oftentimes to decide important matters quickly, it appears that in his case particularly the possession in a highly positive degree of the basic qualities comprising inheritance affords an equipment desirable if not absolutely essential if he is to endure and advance.

In considering a person's capacity as the product of two coöperating factors, nature and nurture,[2] it is inevitable that a question as to their respective importance should arise. In terms of the business man, is the executive born or made?

[1] In the world series baseball games the "breaks" commonly favor the winning team which is thereby termed "lucky" by the spectators. It would be more nearly correct to say that the "breaks" favor the team which has better "class." The usual determinant then is not luck but nerve equipment, a higher grade of playing technique more deeply inbedded in the nervous mechanism.

The need for a somewhat similarly rapid yet accurate transaction of affairs in business is indicated by the term "live wire" which passed upon an executive by his fellow business men is regarded as a decided compliment. Want advertisements often specify that the applicant desired is a "live wire." The quality which is here referred to, that of being a "live wire," has its bases in the same neural conditions above specified. While it does not depend solely upon hereditary equipment, such hereditary equipment provides the essential foundation. *Cf.* Chap. VIII; also the author's *The Executive and His Control of Men* (New York: Macmillan Co., 1915), p. 61.

[2] The meaning of these two terms, so far as the purposes at hand are concerned, is well stated by Sir Francis Galton: "The phrase 'nature and nurture' is a convenient jingle of words, for it separates under two distinct heads the unnumerable elements of which personality is composed. Nature is all that a man brings with himself into the world; nurture is every influence from without that affects him after his birth. The distinction is clear; the one produces the infant such as it actually is, the other affords the environment amidst which the growth takes place, by which natural tendencies may be strengthened or thwarted, or wholly new ones implanted." *English Men of Science, Their Nature and Nurture* (London: Macmillan and Co, 1874), p. 12.

It may be well before attempting to answer this question to present the respective claims of nature and nurture as set forth by perhaps the most illustrious adherent of each, Sir Francis Galton and Professor Lester F. Ward respectively.

As a result of the research undertaken in the preparation of his classic work, *Hereditary Genius*, Galton concluded that nature was the factor of decisive influence. "I am sure that no one who has had the privilege of mixing in the society of the able men of any great capital, or who is acquainted with the biographies of the heroes of history," he says, "can doubt the existence of grand human animals, of natures preëminently noble, of the individuals born to be kings of men. . . . Such men, biographies show to be haunted and driven by an incessant craving for intellectual work. If forcibly withdrawn from the path that leads toward eminence they will find another way back to it, as surely as a lover to his mistress. They do not work for the sake of eminence but to satisfy a natural craving for brain work just as athletes cannot endure repose on account of their muscular irritation which insists upon exercise. It is very unlikely that any conjunction of circumstances should supply a stimulus to brain work, commensurate with what these men carry in their own constitutions. The action of external stimuli must be uncertain and intermittent owing to their very nature; the disposition abides . . . I believe and shall do my best to show that, if the 'eminent' men of any period, had been changelings when babies a very fair proportion of those who survived and retained their health up to fifty years of age, would, notwithstanding their altered circumstances, have quickly risen to eminence." [1]

The views of Ward are diametrically opposed. Instead of finding innate ability the factor chiefly responsible for

[1] *Hereditary Genius* (London: Macmillan and Co., 1869), pp. 24, 38, 40.

the advance of leaders to positions of authority, as did Galton, Ward discovered capacity widespread, waiting only a favorable environment in order to reveal itself as genius. "So far as the native capacity, the potential quality, the 'promise and potency' of a higher life are concerned, those swarming spawning millions, the bottom layer of society, the proletariat, the working classes, the 'hewers of wood and drawers of water,' nay, even the denizens of the slums . . . all these are by nature the peers of the boasted 'aristocracy of brains' that now dominates society and looks down upon them." [1]

The reason why this view fails of recognition, Ward believes, lies in the fact that, repressed by environment, these masses are denied the opportunity of demonstrating the existence of the capacity inherent within them. Such men, the great majority, are hence potential, not actual, geniuses. The number of actual geniuses in a given population, accordingly, "are useful in forming an estimate of the resources of society but they are in themselves no measure of those resources. These may be compared to mineral resources which lie hidden in the earth. The actual workers would then represent the surface indications which the mining prospector sees as he surveys a given region. A few glittering grains and an occasional nugget lie on the surface and he knows that if a shaft is sunk at the proper place rich veins will be revealed. The comparison soon fails, however, for the treasures of the earth are segregated and exist only in rare spots while the treasures of human genius are somewhat uniformly distributed, and there is no region which, if properly worked, will not yield them." [2]

The doctrine voiced by Ward is as a rule very appealing

[1] "Eugenics, Euthenics, Eudemics," *The American Journal of Sociology*, XVIII (1913), p. 754.

[2] *Applied Sociology* (Boston: Ginn and Co., 1906), pp. 266–267.

to Americans. Our dominant political philosophy as enunciated in the Declaration of Independence, particularly in its famous phrase "We hold these truths to be self-evident that all men are created equal," has from colonial times never been confined to affairs of government but as a sort of general truth or democratic slogan has been believed in by the multitude and applied by it rather widely and, we may add, oftentimes most unthinkingly. It was also to be expected that in the transfer of various peoples from Europe to a new country such as ours, family traditions and lines of descent would lose much of their former binding force. The emphasis during pioneer times is upon personal effectiveness in performing crude tasks, hence the laudation of material success and accomplishments in which seemingly genealogy had little part. The more ready were some of our people, no doubt, to accept these views since they had no genealogy in fact worthy of the name, being recruited, or descended from ancestors so recruited, from the scum of the earth. As a result of such facts and opinions intermingled, popular opinion tends toward the laudation of the individual achiever and the more or less open ridicule of the man who seeks to prove fitness by citing his descent.

As a policy of corporation management, in consequence, business men have had little to say concerning the heredity of executives, or, so far as that is concerned, employees in general. It seemed to be a subject difficult to broach to the applicant and of doubtful importance anyway. Moreover, inheritance was felt to carry with it such a tinge of fatalism, of rating any employee upon the basis of something which, try as he might, he was powerless to change, that in the interests of organization *esprit de corps* the matter was tabooed, save perhaps in a derogatory way.[1]

[1] In the course of a fairly extensive reading of employee house organs and attendance at meetings where employees were addressed by their executives, the author has oftentimes had occasion to note this fact.

In the course of his testimony before the United States Commission on Industrial Relations, Mr. Henry Ford stated thus his views:[1] "My idea is to aid men to help themselves. Nearly all men are willing to work for adequate reward. We have all kinds of cripples in our employ, and they are making good. We have a great many who have been in prison and who are outcasts from society. Everyone of them is making a good showing and is gaining in self-respect and strength of character. We will guarantee to take every man out of Sing Sing and make a man of him."

These ideas Mr. Ford elucidated somewhat further in response to questions:

Chairman Walsh: "May I ask you, Mr. Ford, without, of course, intimating the name of any such person, what distinction, if any, is made in the treatment of a man or person who has been so unfortunate as to have been confined in prison, as compared with other employees of your institution?"

Mr. Ford: "We do not let the other employees know anything about it."

Chairman Walsh: "Is there any treatment accorded to him other than what might be called economic treatment as set out by your plan? He is, to your idea, properly fed, properly fed (*sic*)?"

Mr. Ford: "Yes."

Chairman Walsh: "Therefore properly fed and clothed and placed in a position of economic independence?"

Mr. Ford: "Yes."

Chairman Walsh: "And you find from that that it established his moral standard?"

Mr. Ford: "Yes, sir."

The testimony of Mr. Ford, in so far as it can be taken

[1] *Report of Commission on Industrial Relations* (1916), VIII, 7630. ff.

The newspapers following Mr. Ford's testimony announced upon various occasions that the plant was receiving convicts daily. *Cf. New York Times*, January 25, 1915, February 18, 1915, March 10, 1915.

as typical of all employers, it would appear, indicates that business leaders have scant respect for views such as propounded by Galton, whereas the claims of Ward that capacity is widespread and opportunity will permit its appearance meet their cordial support.

The difficulty of securing proof upon the problem under consideration may be illustrated by a study of the Fairbanks family of Vermont.[1] (See pedigree, Figure 7.) James Fairbanks, designated by the figure 1 in line i, married

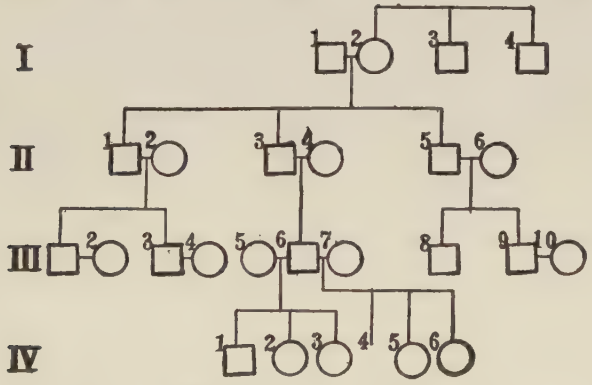


Fig. 7.— Pedigree chart of Fairbanks Family.

Phoebe Paddock. Her two brothers, i, 3 and 4, were iron workers; of the three sons born of this union, Erastus, ii, 1, at the age of nineteen moved to St. Johnsbury, Vermont, and began to manufacture stoves, plows, etc., Thaddeus, ii, 3, a natural mechanic, invented the platform scales, and Joseph P., ii, 5, was a lawyer with literary tastes. Erastus had two sons of whom the elder, iii, 1, went into the scale business, showed much inventive ability and a strong taste for natural history. The second son, Horace, iii, 3, was an excellent administrator and became governor of Vermont.

[1] C. B. Davenport, *Heredity in Relation to Eugenics* (New York: H. Holt & Co., 1911), p. 58.

The son of Thaddeus, Dr. Henry Fairbanks, iii, 6, went into the ministry but was driven by his love of invention into the iron business. He combined mechanical and literary gifts. Of the two sons of Joseph P., iii, 8, was a minister and iii, 9, a sagacious and exact man was secretary and treasurer of the Fairbanks Company. The inventiveness combined with executive ability which this family demonstrated chiefly in the iron business, some, of course, would explain as due to environment; the boys were reared under conditions of high grade with abundant opportunity and incentive to specialize in a particular industry. Others, however, would account for the similarity in terms of inheritance, a matter of transmission through the germ plasm. Either explanation, it is evident, possesses a certain plausibility.

The study of family pedigrees, however, as it has been carried on by the Eugenics Record Office seems to establish with some definiteness both the view that mechanical skill is inherited and the method of such inheritance.[1] The considerable body of data which this office has collected deals similarly with a variety of traits, including items such as stature, eye color, hair form, speech defects, criminality, feeble-mindedness, and ability in artistic composition. In respect to these traits a relationship has been found to exist between succeeding generations, which relationship, moreover, as to its method in some cases has been so well established as to be termed a law of inheritance. With regard to stature, for instance, should the four grandparents vary widely in height, the adult children will also vary, whereas when the grand parental statures are closely alike those of the children will be also. Again, when both parents are tall, the children all tend to be tall; but should both parents

[1] This institution, which is a branch of the work of the American Breeders' Association, is located at Cold Spring Harbor, New York. Its researches have been well summarized by Davenport in the work previously cited. For data on inheritance of mechanical skill see pp. 57–58.

be short some of the children will be short and some tall in ratios varying from 1:1 up to 2:1.[1]

So far as physical traits are concerned most people are ready to agree that the relationship between generations is a matter of inheritance, not environment. But is not the fact that two mentally defective parents will produce only mentally defective offspring,[2] for example, equally as conclusive as to psychical traits? Karl Pearson in a statistical study of the fraternal resemblances in physical and psychical characters of school children, a study which was carried on for several years by trained investigators and which included data drawn from between 3,000 and 4,000 schedules, says, "We are forced, I think literally forced, to the general conclusion that the physical and psychical characters in man are inherited within broad lines in the same manner, and with the same intensity. The average home environment, the average parental influence is in itself part of the heritage of the stock and not an extraneous and additional factor emphasizing the resemblance between children from the same home.

"But we are not yet at the end of our conclusions. By assuming our normal distribution for the psychical characters we have found, not only self-consistent results—linear regression, for example, as in the case of the inheritance of intelligence—but we have found the *same* degree of resemblance between physical and psychical characters. That *sameness* surely involves something additional. *It involves a like heritage from parents.* The degree of resemblance between children and parents for the physical characters in man may be applied to the degree of resemblance between children and parents for psychical characters. We inherit our parents' tempers, our parents' conscientious-

[1] Davenport, *ibid.*, pp. 42, 43.

[2] This has been demonstrated by D. H. H. Goddard who has studied scores of defective families at the Vineland (N. J.) Training School for Defectives.

ness, shyness and ability, even as we inherit their stature, forearm and span." [1]

[1] The hypothesis which Pearson set for investigation was, "if fraternal resemblances for the moral and mental characters be less than, equal to, or greater than fraternal resemblances of the physical characters we may surely argue that parental inheritance for the former set of characters is less than, equal to, or greater than the latter set of characters." The evidence upon which Pearson drew the above conclusions is summarized as follows. (See Tables VI and VII.) The Huxley Lecture for 1903, on the "Inheritance of the Mental and Moral Characters in Man, and Comparison with the Inheritance of the Physical Characters," *Journal of the Anthropological Institute*, XXXIII (1903), pp. 179-237.

TABLE V

INHERITANCE OF THE MENTAL CHARACTERISTICS
SCHOOL OBSERVATIONS ON CHILDREN

Character	*Brothers*	*Sisters*	*Correlation Brother and Sister*
Vivacity	.47	.43	.49
Assertiveness	.53	.44	.52
Introspection	.59	.47	.63
Popularity	.50	.57	.49
Conscientiousness	.59	.64	.63
Temper	.51	.49	.59
Ability	.46	.47	.44
Handwriting	.53	.56	.48
Mean	.52	.51	.52

TABLE VI

INHERITANCE OF THE PHYSICAL CHARACTERS
SCHOOL OBSERVATIONS ON CHILDREN

Character	*Brothers*	*Sisters*	*Correlation Brother and Sister*
Health	.52	.51	.57
Eye Color	.54	.52	.53
Hair Color	.62	.57	.55
Hair Curliness	.50	.52	.52
Cephalic Index	.49	.54	.43
Head Length	.50	.43	.46
Head Breadth	.59	.62	.54
Head Height	.55	.52	.49
Mean	.54	.53	.51
Athletic Power	.72	.75	49

The evidence which has just been presented is, of course, only a very small part of what any reader so inclined may consult for himself; [1] but it suffices, we believe, to substantiate the conclusion that in the selection of executives inheritance is a matter not to be ignored. The officers of a corporation, being business men primarily, very likely will not interest themselves to any great extent in the methodology of the inheritance process but the candidate as he appears before them they ought to regard not as an isolated being but as a man derived from and his capacities conditioned by the germ plasm of his ancestry.

Take the problem of labor turnover, for instance, as it is affected by the impulse to wander or nomadic tendency of an employee. Dr. J. Harold Williams in studying the family history of two groups of delinquent boys, alike save that one group of twenty-four was distinctly nomadic and the other group of twenty-four non-nomadic, finds that of three hundred and twelve persons included in the family histories of the nomadic group 30 per cent were nomadic, while of three hundred and eighteen persons in the non-nomadic group only four, or 1.2 per cent were nomadic.[2] In the opinion of Dr. C. B. Davenport, who has examined the family histories of approximately two hundred nomadic persons, the impulse to wander which characterizes such nomads is due to the absence of the germinal determiner which makes for sedentariness, stability, domesticity, in other words, it is a matter of defective heredity.[3] The feebly inhibited persons accordingly prefer occupations such as explorer, tramp, missionary, itinerant tinker, chauf-

[1] *Cf.* particularly, the works of Sir Francis Galton and Karl Pearson. *Cf.* also J. Arthur Thomson's *Heredity;* and *Heredity and Eugenics,* a course of lectures delivered at the University of Chicago and published by the University of Chicago Press.

[2] "Heredity, Nomadism and Delinquency," *Journal of Delinquency,* September, 1916.

[3] The Feebly Inherited: Nomadism or the Wandering Impulse with Special Reference to Heredity." *Carnegie Institution of Washington,* 1915.

feur or jockey, rather than occupations such as factory hand, farmer, or accountant, in which success requires persistence and stability. The presence or absence of such germinal determiner in the prospective employee's inheritance, were he able to know it at the time of interview, would be a fact of distinct value to an employer, particularly the employer of an important executive.[1]

It is believed, however, that business men would be more ready to agree that heredity is a matter well worth their consideration were they not alienated by the undue and prejudiced claims as to its rôle, of which, we may say, the foregoing statement of Galton is typical. But in the same work, *Hereditary Genius*, Galton himself says, "I acknowledge freely the great power of education and social influences in developing the active powers of the mind, just as I acknowledge the effect of use in developing the muscles of a blacksmith's arm, and no further;" [2] and in a work on *Noteworthy Families* published thirty-seven years later he agrees that "success is a joint result of the natural powers of mind and body and of favorable environment." [3] There can be no quarrel over the reasonableness of this statement.

On the other hand, Ward, whose emphasis upon the importance of environment may have implied the denial of all claims as to heredity, says in speaking of Galton's argument that genius is hereditary: "Notwithstanding the difficulty of the subject and the consequent defects in the evidence, he has, as I believe, sufficiently proved his thesis. The weak point in his argument is not in this main issue, but in another collateral thesis, if it can be so designated, which he seems to think essentially bound up with the first, viz., that the actual genius is the natural genius." [4] The views of Ward, therefore, that lacking opportunity a con-

[1] *Cf.* ch. II.
[2] P. 14.
[3] P. xx.
[4] *Applied Sociology*, p. 115.

siderable amount of native capacity never comes to fruition is in substantial accord with the idea of Galton that success requires not merely natural powers of mind and body but favorable environment as well.[1]

Nature and nurture, it must appear evident, are not two antagonistic forces but coöperative factors in the development of the executive in whom we are interested.[2] The business man in his selection and training of the executive has a problem analogous to that of the machinist in working up a highly finished product from raw material; the workmanship may be ever so skillful but were the original raw materials of inferior grade the final product has to be rejected by the inspector. The usual practice in case defective materials are encountered is to stop the process of fabrication at the earliest possible stage, but commonly such below-standard raw materials are rejected in advance through the application of rigid specifications in purchasing. The man added to the managerial staff of a corporation similarly has to undergo an expensive finishing process, or training program, before he is fully competent to discharge the responsibilities intrusted to him. The corporation, it is here insisted, should be concerned over the native capacity, or hereditary equipment, of those who are later to guide its destinies.

Are corporations, as represented by their officials, thus

[1] Compare, for instance, Ward's *Applied Sociology*, the first half of p. 116, with Galton, *Noteworthy Families*, p. 21.

[2] Dr. C. B. Davenport, the leader of the eugenists in America, states his position as to the claims of nature and nurture most fairly when he says, "The thoughtful mind must concede that as is so often the case where doctrines are opposed, each view is partial, incomplete and really false. The truth does not exactly lie between the doctrines; it comprehends them both. What a child becomes is always the resultant of two sets of forces acting from the moment the fertilized egg begins its development—one is the set of internal tendencies and the other is the set of external influences. What the result of an external influence—a particular environmental condition—shall be depends only in part upon the nature of the influence; it depends also upon the internal nature of the reacting protoplasm." "Euthenics and Eugenics," *Popular Science Monthly*, January, 1911, p. 18.

interested or are they not? The views of Mr. Ford cited on a preceding page would seem to indicate that they are not. But in order to arrive at the matter more definitely, the author has put this query to some twenty-five employment managers, Do you believe the executive is born or made? As a rule this proved to be a difficult question to answer; the replies were in the main quite labored with numerous questions and definitions and qualifications, although as to general import the following given by an employment manager of a large elevator manufacturing works may be taken as typical, "Made—but the foundation to build on must be there." There was not a single reply which did not include both factors. It is believed, accordingly, that the statement heretofore quoted does not represent the real views of business men, but that they are sound in their ideas as to the importance of inheritance itself.

An appreciation of the importance of this factor, nevertheless, does not vouch for the efficiency of the technique employed in arriving at a correct knowledge of heredity, nor does it assure an accurate statement of the problem itself. Very commonly employers regard the candidate's inheritance and record as synonymous, and in the investigation made concerning the positions previously held and the degree of success attained in each they conceive that his inheritance is satisfactorily made known. Viewed in the light of the preceding discussion of nature and nurture, does it not appear evident that a man's business record comprises the elements both of heredity and environment, and that in consequence what often is accepted as a measure of inherent capacity constitutes nothing more than a test of environmental opportunity or its lack? These are matters which appear to merit attention in later chapters.

CHAPTER V

Phrenology and Physiognomy

A study of the essential qualities of an executive and of the broader aspects of our problem involved in the respective claims of nature and nurture having now been completed, we turn to the more detailed phases of the process of selection. The analysis of one's fellows, whether with the aim of facilitating social relations in general or for purpose of their possible selection as employees, constitutes a problem of perennial interest. Men have been drawn to it and their more or less penetrating thought has evolved explanations or systems such as the following:

astrology	phrenology
clairvoyance	palmistry
cleidomancy	physiognomy
podomancy	character analysis
spasmotomancy	intuition
chrigonomy	physical tests
chirography	mental tests
metaposcopy	

Certain of these on account of their value in the selection process and others on account of their vogue merit brief consideration in this and the succeeding chapters.[1] The

[1] As an instance this advertisement in the Oct. 11, 1917, issue of *Printers' Ink* may be cited: "Wanted, a first class man with experience for permanent position on staff of Vice President to shape and direct the advertising policy of a trunk line railroad. To save time and trouble to both applicant and employer, kindly send in photographs—1 full length, 1 exact profile view (bust) and 1 front view (bust) full face holding hands close in front of body, one palm outward and other hand palm inward. Call for recommendation and personal interview will come later. 'Vice-President,' Box 16, care *Printers' Ink*."

first eight of these systems appear not to merit consideration here, however strongly from time to time their claims have been championed, so we commence wth the ninth, phrenology.

Phrenology, as defined by O. S. Fowler, a leading American adherent of the system, "professes to point out a connection between certain manifestations of the mind, and particular conditions and developments of the brain." [1] The system was first formulated by Dr. F. J. Gall, an anatomist whose attention was early drawn to the subject by his failure as a schoolboy to compete successfully with certain pupils, possessing prominent eyes, who were able to learn by rote with great facility. His later experience at the university reinforced his earlier impression, that the relation of prominent eyes and ability to remember was not merely a coincidence. After further reflection, he conceived that if memory for things was indicated by an external sign the same might be the case with other powers of the mind; hence all individuals, particularly those distinguished either by any remarkable ability or unusual deficiency, as criminals, became the objects of his attention. Empirically, and upon the basis of very slender evidence, it must be said, Gall after a time came to the conclusion which he thus stated: "The brain is composed of as many particular organs as there are propensities, sentiments, and faculties, which differ essentially from each other. And as the organs and their localities can be determined only by observation, it is essential that the form of the head or cranium should represent, in most cases, the form of the brain and should prompt us to seek the means by which we can ascertain the fundamental qualities and faculties and the seat of their organs." [2]

[1] O. S. and L. N. Fowler, *Phrenology: Proved, Illustrated, and Applied* (New York: W. H. Colyer, 1836), p. 7.

[2] *Ibid.*, *Functions of the Brain* (Boston: Marsh, Capen and Lyon, 1835), I, 5.

In 1796, Gall commenced giving courses of lectures at Vienna which, if one may judge from the action of the Austrian government in surpressing them later as dangerous to religion, must have attracted considerable attention. In company with the pupil who was to be his powerful ally, J. G. Spurzheim, Gall quitted Vienna in 1805 for a tour of investigation and lectures in Germany, following which he took up his abode at Paris. Spurzheim continued the lectures in the British Isles and later in America. The widespread discussion aroused by these two propagandists, the societies formed in their wake, the phrenological magazines founded and the adherents gained among noted people, it is difficult for those of a later date to appreciate; the subject itself was of peculiar interest and the methods employed by its propagators aroused both execration and devotion.

The system of phrenology, founded by Gall and furthered by many others, in its essentials consists of four propositions.[1] These as stated by O. S. Fowler, mentioned above as a leading American adherent, we may now examine:

1. "The brain consists of as many different portions or organs, as the mind does of faculties."

The mental faculties as the phrenologist distinguishes them comprise items such as veneration, individuality, credulity, sadness, and jealousy. According to the above assumption the feeling of veneration arises from the activity of a certain portion of the extreme top of the brain, jealousy from a portion just above the eyebrow, etc.

The localization of faculties thus claimed must be sharply distinguished from the localization of functions as worked

[1] The view that intelligence resides exclusively in the brain, it may possibly appear should be considered as a fifth. What we are seeking here, however, are phrenology's most distinctive tenets. The view just stated is to be found in Hippocrates and with considerable elaboration in Descartes and others.

Fowler states these propositions, in the work cited, on pp. 17, 21, 22, 24.

out by the scientist. The cerebro cortex has been found to possess more or less well-defined regions in which the sense organs and the motor capabilities function;[1] in consequence of this knowledge, a movement of the leg, for instance, can be referred to one section of the cortex, the sense of sight to another. Information such as this is useful to the surgeon, at times, in enabling him to perform operations upon the brain with less harm due to unnecessary damage of the skull.

Yet, whereas the taste of an orange, let us say, has its connection with a certain portion of the brain surface, the taste, æsthetic in this instance, for paintings by the old masters cannot thus, or even similarly, be localized. Æsthetic taste, as well as the other faculties specified by phrenologists, sadness, faith, curiosity, etc., represents a general mode of the organism's reaction and the claim that such reactions depend upon their respective cortical areas violates the concept of mind as the psychologist knows it.

2. "There exists a reciprocal proportion between the relative strength and power of the various mental faculties, and the size of those portions of the brain, or those organs, by which they are severally manifested."

A head of large size, according to popular estimates, is a sign of wisdom or unusual mental ability in some endeavor. It is true, the brain weights of certain eminent men lent credence to this view, yet the evidence, such as it is, cannot be considered conclusive. Brains over sixty ounces in weight, in itself unusually large, are frequently found in quite undistinguished persons, and even in idiots sixty ounces has been recorded.[2]

The nature of mental action, in fact, is not well known; it is believed to be the result of certain molecular changes in the gray matter but their precise nature and extent,

[1] *Cf.* Sherrington, "Brain: Physiology," *Ency. Brit.*, 11th ed.
[2] Parsons, "Brain: Anatomy," *Ency. Brit.*, 11th ed.

particularly their connection with the phenomēna of thought and feeling, remain yet to be demonstrated. A view which possesses considerable plausibility is that mental ability depends upon the texture and activity of the cortical cells, in other words, upon quality instead of mere quantity of brain matter.[1]

3. "The shape of the brain may generally be ascertained by the form of the skull."

This in popular speech is referred to as "reading the bumps." Or as stated by Fowler,[2] "It remains, then, for the phrenologist merely to ascertain what portions of the brain are employed to manifest the various faculties and, also, what are the indications upon the skull and the relative size of these organs . . . and then he will have sufficient data from which to determine even the *minutiæ* of the character and talents, and of the various mental qualities of any and of every individual."

The brain case, however, is found not to be of uniform thickness, and the presence here and there of supporting tissues and cerebro-spinal fluid, together with a variety of malformations, still further renders the skull exterior an inaccurate or at least uncertain index of the brain conformation.[3]

4. "The history of the discovery of phrenology, furnishes ample demonstration of its truth.

"Like all the other exact sciences," continues Fowler,[4] "every operation of it was discovered, and brought to its present state of perfection, *entirely by induction*—by an observation and classification of facts."

The correctness of this statement may be examined by citing the methods employed by Gall himself. A beggar

[1] *Cf.* Sherrington, *Integrative Action of the Nervous System* (New York: C. Scribner's Sons, 1906.

[2] *Ibid.*, p. 24.

[3] *Cf.* Macalister, "Phrenology," *Ency. Brit.*, 11th ed.

[4] *Ibid.*, p. 24.

who had attracted the doctor's attention by his extraordinary manners and who was continually reverting to his pride and aversion to labor was found upon examination to possess, Dr. Gall says, "On the upper and back part of the middle line, a prominence extending from above downwards, which could arise only from the development of the brain beneath. I had not previously observed this prominence in other heads, and for this reason, I was very anxious to discover what it indicated. . . . A prince in Vienna was remarkable for his ridiculous pride, his stiff gait, and his practice of constantly quoting his ancestors. Happily he was bald in the region of the head, where I had noticed the prominence in the mendicant's head and I thus assured myself that he had the same conformation. These facts were sufficient to produce the idea, that pride is a fundamental quality, connected with a particular organ of the brain." [1] Similarly, the propensity for theft was located by dividing a crowd of errand boys into three classes, those who took pride in stealing, those who abhorred it and those indifferent to it; a certain long prominence of the skull was found well developed in the first, flat in the second, and moderately developed in the third.[2] The location of the disposition to murder was hit upon by chance in comparing the skull of a parricide with that of a robber murderer; "there was, in each," observes Dr. Gall, "a prominence strongly swelling out immediately over the external opening of the ear." [3] Induction such as this, it is needless to say, does not convince.[4]

[1] *Ibid.*, *Functions of the Brain*, IV, 166–167.
[2] *Ibid.*, IV, 128–129.
[3] *Ibid.*, IV, 51.
[4] The adherent of phrenology will complain that the cases cited do not indicate fairly the very great labors of Dr. Gall and his followers. This is true. Yet the careful reader of Dr. Gall's six-volume work from which these instances are drawn will find numerous cases, it is believed, where the evidence is quite as slender as with those cited. The evidence adduced by O. S. Fowler is oftentimes too fragmentary to be taken seriously, a sort of anecdotal method of localization. *Cf. ibid.*, *New Illustrated Self-In-*

It appears, consequently, that each of the so-called principles of phrenology is fallacious. Its localizations were arrived at with but little supporting evidence, the brain and the exterior of the cranium do not conform as assumed, the relation between size and functional power is too crude to prove acceptable, and the division of the mind into the given faculties is entirely arbitrary. Such was the system, erroneous not simply in detail but in its fundamental assumptions, which charlatans have long proclaimed all sufficient in the diagnosis of character and which the credulous, due to their interest in its subject-matter, applied with scant discrimination and, upon the whole, mischievous effects.

We turn now to consider a second means of analyzing men, physiognomy. As defined by Lavater, commonly though erroneously known as its founder, physiognomy is "the art or science of discerning the character of the mind from the features of the face, or the art of discovering the predominant temper or other characteristic qualities of the mind by the form of the body, but especially by the external signs of the countenance, or the combination of the features." [1] It accordingly, as compared with phrenology, is much less restricted in its scope since the latter, strictly speaking, concerns itself with the cranium alone whereas physiognomy, especially in the way the system has been put into practice, includes in its purview items such as facial expression, shape of nose, length of fingers, color of eyes and hair, skin texture, clothing, posture and gait. It is reasonable to suppose that data upon such topics when skillfully analyzed and classified would yield

structor in Phrenology and Physiology (New York: Fowler and Wells, 1859), especially Section IV. The variations among the phrenologists with respect to the number, names and locations respectively of the so-called faculties indicate the same thing, that they were arrived at by a method of pure empiricism and for the most part with little real evidence.

[1] Stanton, *System of Physiognomy* (Philadelphia: F. A. Davis, 1890), p. 7.

results considerably more definite than the phrenologist would find possible.[1]

The study of facial and bodily characteristics dates from the earliest writers. Homer puts these words into the mouth of Nestor when the latter meets Telemachus: "By certain signs which I discern upon thy face, O illustrious youth, I recognize whose son thou art. I do not wonder to see such splendor in thy eyes. Thy face is proud and generous, thy great eloquence and thy reason recall to me thy father. What youth could such a one as thou be, were he not the son of the great Ulysses." In his Proverbs Solomon observes that "a haughty person, a wicked man, walks with a froward mouth, he winks with his eyes, he speaks with his feet, he teaches with his fingers"; and Ecclesiasticus says "the heart of a man changes his countenance, whether it be for good or for evil; and a merry heart makes a cheerful countenance. . . . A man may be known by his look and one that hath understanding by his countenance when thou meetest him."

It was Aristotle, however, who developed the first systematic treatise of physiognomy, a discussion comprising six chapters and some twenty-five pages.[2] "It is stupid to believe in one sign only," he declares, "But when many signs accord of one thing, it may be the more confidently admitted that the signs are true." In consequence, Aristotle first presents a classification of persons according to their characteristic attributes and he next proceeds to analyze these attributes with some detail.

For several centuries following Aristotle, physiognomy, if one may judge from the extensive literature devoted to

[1] The distinction between phrenology and physiognomy is among practitioners commonly much confused, if not entirely obliterated. The author has yet to meet a phrenologist who confines himself to a study of the cranium or a physiognomist who in his reading gives it no consideration.

[2] *Aristotle's Works*, translated by Thomas Taylor (London: The Translater, 1809), IV, 427.

it, enjoyed a considerable vogue, the sixteenth century being especially prolific in reprints and new publications. But during the two centuries which succeeded, owing apparently to the development of a more accurate knowledge of anatomy, the interest in physiognomy steadily declined, those who might have been its adherents busying themselves instead with anatomical studies or being absorbed by the expounders of the phrenology which arose about this time, the beginning of the nineteenth century.[1] Physiognomy is accordingly a very old system, long since, so far as popular opinion is concerned, decadent; and the sub-title of a recent work published in the attempt to revive it, *The New Science of Judging Men*, is, of course, quite misleading.

Physiognomy could never have attained its considerable vogue without the possession of certain merits nor would it have become decadent without cause. Hence it may be of value to attempt an estimate of these merits and defects. The systematic exposition of Aristotle, it may be assumed, was fully abreast of such conceptions of anatomy, physiology and psychology as were current at the time; but the development of these sciences by later investigators, particularly by Bell, Darwin, and modern experimental psychologists, provided certain more definite concepts concerning the validity of the principles, so-called, formulated by physiognomists.

The attempt to read the mind by noting its outer manifestations necessarily must assume that some reciprocal influence exists between mind and body. Psychologists are agreed that such assumption is correct.[2] This fact of psycho-physical parallelism, however, guarantees to the

[1] Macalister, "Physiognomy," *Ency. Brit.*, 11th ed.; P. Mantagazza, *Physiognomy and Expression* (3rd ed., London and Newcastle-on-the Tyne: W. Scott Publishing Co., 1904), Chap. I.

[2] "Mental phenomena," says William James, "are not only conditioned *a parte ante* by bodily processes; but they lead to them *a parte post*. That they lead to acts is of course the most familiar of truths, but I do not merely mean acts in the sense of voluntary and deliberate muscular performances.

physiognomist nothing. His task, it still remains, is to connect the exceedingly numerous and oftentimes evanescent mental states with their respective external concomitants, to such degree of accuracy as will render his correlations of value.

This problem difficult in itself, is further complicated by the fact, pointed out by Darwin, that whereas certain actions once were of direct or indirect utility in relieving or gratifying the desires or sensations accompanying their respective states of mind, the tendency exists through the force of habit or association for such actions to be performed whenever a given state of mind is induced, even though they may not then be of the least use. Similarly, under the influence of a directly opposite sensation or emotion, actions of a directly opposite kind, also of no use, tend to be performed.[1] In other words, we must look upon human nature as the product of an evolution thousands of years in duration, and bearing in its present make-up not a few odd survivals from the past. The physiognomist, in consequence, must decide whether an observed feature or expression is an index of the individual disposition or an heredity ethnic character, a still further complication of what was already an elusive task.

It is not meant to imply that the mind expresses itself externally without semblance of order, quite by chance. This is not the case; the research carried on by men such

Mental states occasion also changes in the calibre of blood-vessels, or alteration in the heart-beats, or processes more subtle still, in glands and viscera. If these are taken into account, as well as acts which follow at some remote period because the mental state was once there, it will be safe to lay down the general law that no mental modification ever occurs which is not accompanied or followed by a bodily change." *Principles of Psychology* (New York: H. Holt and Co., 1913), I, 5. *Cf.* also *ibid.*, II, 363, 527.

[1] Darwin terms these the principles of serviceable, associated habits and of antithesis respectively. *Cf.* his *Expression of the Emotions in Man and Animals* (London: J. Murray, 1873), p. 28. James doubts that Darwin's doctrine of antithesis expresses any causal principle, adding that most critics have considered this the least successful of Darwin's speculations on the subject. *Principles of Psychology*, II, 484.

as Bell, Duchenne, Spencer, Darwin, and Mantegazza, has resulted in the formulation of principles. But these are few in number and very general in nature. As such they do not meet satisfactorily the needs of the professional physiognomist, intent upon application and of making the proper commercial impression.[1]

The latter, accordingly, prepares a list that does meet his needs, however intermixed with fancy and dogma his set of assumed relationships may be. To illustrate, Dr. Blackford, the most widely advertised of the so-called character analysts, has this to say of color: "In brief, always and everywhere, the normal blond has positive, dynamic, driving, aggressive, domineering, impatient, active, quick, hopeful, speculative, changeable, and variety-loving characteristics; while the normal brunette has negative, static, conservative, imitative, submissive, cautious, painstaking, patient, plodding, slow, deliberate, serious, thoughtful, specializing characteristics.

"In applying this law of color to people of the white race, the method is simple. The less the pigmentation in any individual, the more marked will be the characteristics of the blond in his physical, mental, and psychical nature; the greater the degree of pigmentation, the more marked the characteristics of the brunette." [2]

Space does not permit citation of the numerous and equally positive deductions made concerning various other features of the person under observation. Suffice it to say that this system takes for its basis nine factors, termed variables—color, form, size, structure, texture, consist-

[1] Compare, for instance, the statement of these principles by Macalister, "Physiognomy," *Ency. Brit.*, 11th ed. with the following statement by Stanton, *Encyclopedia of Face and Form Reading* (2nd ed.; Philadelphia: F. A. Davis Co., 1895), p. 1. "The art and science of physiognomy, as shown in the 'Encyclopedia of Face and Form Reading' will put the reader in possession of this almost superhuman power to read faces by rule and law settled and defined."

[2] K. M. Blackford and A. Newcomb, *The Job, the Man, the Boss* (Garden City, N. Y.: Doubleday, Page and Co., 1914), pp. 141–142.

ency, proportion, expression, and condition. Even granted that this be a complete classification, which at best is considerably beyond the limits of probability, these nine variables constitute exactly what their name indicates, items which are in themselves subject to almost innumerable variations. Evidently we have here a system too fearfully and wonderfully made to justify the precise results claimed for it.[1]

The astrologers sweeping the heavens in their search for the determiners of human fate established, at least to their own satisfaction, causal connections between certain planets and certain individual traits. The child born under Cancer, for instance, was thereby phlegmatic, indolent, and gentle tempered; but born when Mercury was low on the horizon he was fated to be of "small stature, with small insignificant features, and very small and quickly moving eyes, and in character shifty, a boaster, foolishly loquacious, and a great liar." [2] The error here, we now recognize, is that of claiming a definite causal connection between factors where the relation was either accidental or nonexistent.

[1] In regard to this phase of the system, we are told that readers "will doubtless find many apparent discrepancies and contradictions, but these discrepancies and contradictions are only apparent. The laws of human nature, like all other laws of nature, are orderly and uniform in their operation, and do not admit of exceptions." *Ibid.*, p. 176.

In a lecture given in a New York public school during the time (1914–15) he was serving as educational consultant to the Board of Education, Dean Herman Schneider of the College of Engineering, University of Cincinnati, said in speaking of Dr. Blackford's system, "This seems to be a development of the old idea of phrenology. It is claimed in this system that physical characteristics indicate certain abilities. For example, a directive, money-making executive will have a certain shaped head and hand. A number of money-making executives were picked at random and their physical characteristics charted. We have not found that they conform at all to any law. Also, we found men who had physical characteristics that ought to make them executives, but they were anything but executives. A number of tests of this kind gave negative results. We were forced to the conclusion that this system was not reliable."

[2] R. Baughan, *The Influence of the Stars* (London: G. Redway, 1889), p. 13.

This fundamental error vitiates practically all the so-called systems specified at the beginning of the present chapter, and if certain of them are worthless it is merely because their methodolgy is such that this error cannot be eliminated and if others are deemed valuable it is due to the fact that their methodology successfully reduces the risk of wrong causal connections. So far as phrenology and physiognomy are concerned they should be regarded not, as some employment managers mistakenly view them to-day, as sciences in their infancy but as pseudo-sciences, hoary with age and in the main, due to their high percentage of error, neglected because untrustworthy. With respect to the selection of executives, extraordinary claims have been made for them but their results are at best questionable.[1]

The discussion of phrenology and physiognomy thus far, though largely negative, it is believed will sufficiently warn the reader of the very great ease and danger of accepting chance connections—such as rubber heels and dishonesty, a mole on the root of the nose and a pleasant wit, a certain deep wrinkle in the palm and long life, curly hair and constitutional vigor, etc.—as true causal relations; and will also convince him of the important rôle occupied by charlatans in the careers of the pseudo-sciences. In the words of a most acute critic, applicable quite as well to physiognomy as phrenology, "Die Schädellehre ist allerdings night so sehr Irrthum in der Idee als Charlatanerie in der Ausfuhrung." [2]

[1] *Cf.* as an example of the usual platitudes and errors Stanton, *System of Physiognomy*, pp. 561, 566, 568.

[2] Cited by Macalister, article on "Phrenology," *Ency. Brit.*, 11th ed.

The study of human nature, however, as delineated by a candidate's outward signs, to use the term employed by Aristotle, has a distinct value, as we shall attempt to point out in the following chapter. In the opinion of the author, accordingly, Professor Hollingworth is unduly severe when he concludes his otherwise excellent chapter with the statement, "The mere facts of physical structure, contour, shape, texture, proportion, color, etc., yield no more information concerning capacities and interests than did the incantations of the primitive medicine-man or the absurd charts of the phrenologists." *Vocational Psychology*, pp. 55–56.

CHAPTER VI

Methods of Selection

In a preceding chapter a list of fourteen qualities was presented, the various qualities being ranked in the order of their importance as the business men responsible for these ratings viewed the requirements for a position as executive. The claims of heredity as a factor worthy of consideration in the selection process were next considered, following which the two pseudo-sciences, phrenology and physiognomy, have been discussed. The decision as to these was, in the main, adverse although, as was pointed out, certain features deemed of value were to be brought forward in the present chapter. We are now to consider briefly the following methods of selection as they apply to the executive: the interview, heredity tests, physical tests, mental tests, performance during training, and performance at work. The degree of accuracy with which the first four of these methods are to be applied will be considered in Chapter VII, the concluding chapter with respect to selection *per se*.[1]

Of the four selection methods here under consideration, the interview is by far the most commonly employed, and, it may be added, the most difficult, no doubt, to bring under rules of procedure which may rightly be termed scientific. The ability to select competent men is regarded quite correctly as a valuable accomplishment, but since the interview during which this selection commonly takes

[1] The latter two methods will be considered in Chaps. X and XI. *Cf.* especially pp. 175 ff. and 209 ff.

place is a man-to-man affair, its results difficult to check, officials are found as a rule firmly convinced of their particular ability to judge candidates with a rare precision. In fact, the author does not recall that he ever has heard any corporation official or employment manager admit any deficiency when it came to picking out men, to use the common expression, although he has had pointed out to him in numerous cases how other officials and employment managers were lacking such ability. Yet it seems reasonable to suppose that the ability to select by means of the interview does vary, the difficulty being not so much that men possess in this respect unequal capacity as that such variations are not known. Evidently, there exists the need for submitting the interviewer's capacity to some definite test.

In an experiment which he conducted in a large sales organization of the American Tobacco Company, Professor Walter Dill Scott has made such a test in so far as it relates to the interviewers of prospective salesmen. Twenty-nine applicants, numbered alphabetically for convenience in making the test, were to be interviewed, of which number fifteen men were to be selected. The interviewers, numbered I to VIII, seven of them being salesmanagers and the eighth a division manager, the superior officer of the seven salesmanagers, occupied separate rooms and as the applicants appeared in turn each interviewer rated the man in whatever order of merit his judgment dictated, from one to twenty-nine. Each interviewer was permitted, even encouraged, to use whatever method he was accustomed to employ in the selection of salesmen. The respective ratings were as follows (see Table VII): [1]

[1] From address delivered before the Salesmanship Club of Detroit, January 27, 1916. *Cf. Printers' Ink*, February 17, 1916.

TABLE VII

A. T. Company

November, 1915

	Average	I	II	III	IV	V	VI	VII	VIII
A	4	18	9	5	21	2.5	2.5	3	11
B	5	8	3	11.5	3	2.5	14.5	26	5
C	7	4	3	11.5	6	15	20	15	4
D	11.5	19	15	7	21	9	11	3	17
E	1	2	3	19	2	23	1	3	2.5
F	14	1	9	13.5	24.5	9	2.5	22	24
G	15	20.5	9	13.5	16.5	12	8	27	2.5
H	10	9	9	24.5	8	6	8	18	15.5
I	3	28	3	6	4.5	12	4.5	3	9
J	2	7	3	4	4.5	23	12.5	6	6.5
K	19	15	24	21	13	23	25	11	6.5
L	6	11	9	10	1	12	12.5	19	1
M	9	26	15	1	8	9	16.5	3	15.5
N	21	13	24	17	26	23	8	10	26.5
O	11.5	14	9	8.5	21	2.5	8	17	22
P	24	16	26.5	24.5	10.5	23	25	20	13
Q	13	3	20	8.5	13	15	20	13	11
R	18	28	20	24.5	16.5	2.5	16.5	7.5	22
S	26	24	15	18	28	23	14.5	25	26.5
T	22	20.5	9	20	16.5	23	20	23.5	19
U	17	23	24	3	21	6	8	16	28.5
V	8	6	15	2	8	23	4.5	12	14
W	16	10	29	15.5	13	6	18	9	11
X	23	22	20	22	10.5	23	25	7.5	22
Y	27	17	15	28	28	23	22	28	19
Z	20	12	20	15.5	24.5	23	25	14	3
AA	25	5	20	24.5	21	15	29	21	25
BB	28	28	26.5	29	16.5	23	23	29	19
CC	29	25	28	27	28	23	25	23.5	28.5
Correlation with Interviewers—		.70	.41	.76	.73	.70	.47	.74	.55	.65

Applicant A was ranked eighteen by the division manager (Interviewer 1), and twenty-one by a salesmanager (Interviewer IV), judged by these two men alone he would have been rejected. He impressed the other six interviewers much more favorably, some, it would appear from the ratings 2.5, 2.5, and 3, very favorably indeed. In the final rating he becomes man number four and is accordingly by a considerable margin, engaged. The diversity of judgment shown by the various interviewers in this and other in-

stances is striking. In consequence, no single applicant was rated among the first fifteen, the number to be selected, by all the interviewers; nor did they agree upon as many as six men for purposes of rejection. What this means if any one of these interviewers had been alone responsible for the applicant's selection or rejection, as had been the practice with the American Tobacco Company and is very commonly the case elsewhere, is evident.

The fifteen men thus selected were put into the field and after some six weeks' active service in selling it was decided by their respective superior officers that C, D, G, and M were "star" salesmen. Yet according to the record shown in Table VII not one interviewer of the eight had rated all four of these men definitely among his fifteen deemed worthy of selection.[1] C was rated twentieth by one interviewer, D also had one rating as twenty-first, G one as twenty-seventh, and M one as twenty-sixth. Since these four salesmen had demonstrated their capacity, it appears that the test of performance confirms the showing made in the table, that certain of the interviewers were subject to rather serious variations in judgment when selecting men.

The fact that these interviewers varied so widely in their judgment implies that possibly some were, so far as the ability to select salesmen is concerned, superior to others. This was tested by means of what Professor Scott termed the concensus of opinion and the variation of the individual interviewer from it, it being assumed by him that the man who agrees most closely with the concensus of opinion is the best judge. Interviewer II by this test ranked superior; his judgment to the degree of seventy-six per cent coincided with that of the group. Interviewer I, the division manager and the superior officer of the group, had the lowest per-

[1] In the printing of this table as it appeared in the source from which the author derived it a typographical error has evidently been made since with the figures as they are it would appear that Interviewer III had placed these four men within the given fifteen.

centage, forty-one per cent, and is rated as the poorest interviewer of the eight.

In practice, the interviewer's task is rendered more difficult owing to the fact that applicants very commonly have little knowledge of the requirements for the position sought nor of their own capacities to fill such position satisfactorily were it tendered them. They need very seriously vocational guidance, but in its lack they are, to use the common expression, willing to take a chance. For this reason, the interviewer cannot take it for granted, merely because they have called, that fitness for the position desired is assured,[1] nor can he depend implicitly upon the candidate's estimate of himself in terms of capacities required. The candidate very likely does not know,[2] or it may be, impelled by the view very frequently encountered that in selling one's services let the buyer beware, he gives the situation a much more favorable aspect than the conditions justify.

Since it appears that the interview has not attained the precision desired were it to constitute the sole means employed in the selection of executives, we may consider the evidence concerning a candidate's heredity in the light of a desirable supplement or check. Inasmuch as the importance of the heredity factor has already been considered in a preceding chapter we shall here concern ourselves with the methods by which information concerning inheritance is to

[1] E. St. Elmo Lewis voices a plaint common among employers: "Of the men who have come to me to study advertising, many have known absolutely nothing about business and have had no taste or skill in either designing or writing, yet these men were entirely willing to waste their time and mine learning something in the practice of which they could not possibly make good and from which they could never extract an iota of happiness."

[2] A reason for this is the fact that in our country the barriers between occupations are by no means fixed. The University of Illinois in a study of 3663 of its students found them so distributed in the various schools that the conclusion was drawn, so far as was indicated by its study, that a son does not usually follow his father's occupation. *Cf.* the *University of Illinois Press Bulletin*—Club of Agriculture—January 25, 1915.

be secured. This problem, in those cases in which the prospective employer is convinced that something should be known of the candidate's family stock, is commonly conceived in much simpler terms than is warranted; as, for example, when a certain banker, a self-made financier, let us say, is found to have a son desirous of following his father's vocation, the assertion is made that "banking runs in the blood." Yet if the father as a result of an accident in his youth had gained a peculiar bump on the forehead should the son also be expected to possess such a formation on the ground that in his case a certain bump runs in the blood? What we have to do with here is the problem of the inheritance of acquired characters, and it may be well before discussing it further to describe briefly the method of inheritance as biologists understand it to-day.

Since heredity is merely a convenient term for the genetic relation between successive generations, the origin of this relation so far as it applies to human beings is to be sought in the protoplasm from which the new individual evolves. The germ cell of the male, termed a spermatazoön, in the reproductive process combines with the germ cell of the female, termed an ovum, to form the fertilized egg from which the new individual, exhibiting qualities common to his progenitors, develops. The problem is how to account for these common qualities. It was once held that the fertilized egg in itself was a preformed embryo, later that the spermatazoön instead was the miniature being, which, penetrating into the egg during fertilization, was there nourished in its growth. Although as thus stated these views have been discarded, they contain an element of truth; egg and sperm, one representing the properties of the female, the other the properties of the male progenitors, unite to form a mixed product, which has inherited the peculiarities of both parents.[1] In other words, the study

[1] Hertwig, "Advances and Problems in the Study of Generation and In-

of the fertilized cell as it develops and undergoes successive divisions demonstrates that in the newly formed cells, the daughter cells, so called, a precisely equal partition of the maternal and paternal contributions has taken place. But although fertilization thus implies the subtle mingling of two minute organisms so that they became physiologically one, each of them, egg cell and sperm cell, was already the complex product of ancestral lineage.[1]

It seems evident, therefore, that in so far as the heredity of offspring is concerned, the qualities acquired by the parents cannot be transmitted directly as such but only through the influence which the possession of such qualities may have exerted upon the germ plasm. Of this influence biologists are very sceptical.[2] It has been believed by Weismann, as stated in his celebrated theory of the continuity of the germ plasm, that somatic variations, that is, variations acquired by the body, are not transmitted because they do not affect the germ plasm, it being his assumption that within the organism but unlike the substance composing the perishable body of the individual is a specially organized and living heredity substance transmitted from generation to generation.[3] While as a result of his later studies Weismann admitted the possibility of some direct modification of the germ plasm being brought about by the body's influence,[4] the implication of his theory is this: A child resembles its parent not because produced from this parent but because both child and parent are produced from the same stock of germ plasm.

heritance," Congress of Arts and Science, Universal Exposition, St. Louis (1904), V, 294–295.

[1] Thomson, *Heredity*, pp. 50–52; Davenport, *Heredity and Eugenics*, pp. 269–270.

[2] *Cf.*, Doncaster, *Heredity in the Light of Recent Research* (Cambridge: The University Press, 1910), p. 97.

[3] *Ibid.*, *The Germ-Plasm* (trans. by W. N. Parker) (New York: 1898). *Cf.* especially p. 395.

[4] *Cf. ibid.*, 417 ff.

It is believed that the rôle of inheritance as here described reinforces the claim presented in a preceding chapter that heredity is a factor worth considering in the selection of the business executive; at the same time, it is true, the prospective employer may have come to suspect that recondite laboratory processes were to be recommended as necessary in the application of such knowledge of heredity to the selection process itself. This is not the case, however. Professor W. E. Castle of Harvard University, a biologist well known for his research in the problems of inheritance, has commended to the author such a practical method that his remarks are being quoted in full: [1] "How to secure and evaluate information on this head is a purely practical question on which the ideas of business men are likely to be of more value than those of scientists inexperienced in judging men as to their qualifications for business positions.

"I should suppose that questions addressed to the candidate or his references as to the occupations of his parents might be of value. For example the questionnaire might call for:

"Occupation of father.

"Positions of honor, profit or trust held by him, with duties.

"Business or social situations held by mother, including offices in societies honorary, business, religious or social in character.

"Often a woman never actually engaged in business may display unusual executive ability in the way she manages her household, or some church, social or political organization with which she is connected. Such characteristics in the mother (no less than in the father) are likely to crop out in the sons. Questionnaires should be carefully formed to draw out such information.

"Whether executive ability is a matter of heredity or

[1] From letter to the author, January 27, 1917.

not, the home environment of an individual should count for training him for executive work. Still more important is his *individual* experience. The boy who has captained a ball team successfully has executive ability, especially a *scrub* team. The one who has managed a coöperative enterprise of boys successfully certainly has it.

"But this is beyond the scope of your question which concerns heredity alone. I think inquiries about the parents might be well worth while in this connection, but I should always value them below information about the career of the individual himself, even as a boy before he entered business at all. Inquiries about the grandparents I should not consider worth while. No information here would be of much value unless it related to all eight grandparents and were fairly complete, a quite unattainable result in practice."

In short, Professor Castle commends the method of arriving at the genetic relationship between successive generations by tabulating the most essential parts of the information existent as to how the heredity factor has indicated itself in various concrete ways, the information being valued the more highly the more directly it bears upon the person in whom our chief interest centers, the candidate himself.[1]

[1] The methods used by two leading corporation presidents are worth noting in this connection: Says Frank A. Vanderlip of the National City Bank; "The right kind of man should have a lot of friends. If he has been president of his class in college, or president of his alumni association, or a club director, or connected in a big way with commercial or banking, or social or charity associations—anything to show that his friends had picked him out as a man worthy of their highest regard and favor—that would count strongly for him. This does not mean being a 'good fellow', a clinker of glasses, or a mere handshaker. It means that people respect him, that he has personality, that he is broad enough in his information to interest people." *Ibid.*, "How I Pick a $25,000 a Year Man." *American Magazine*, LXXXII, 19.

J. W. Earle of the Remington Typewriter Company says, "In few phases of life do the temperamental differences of individuals show themselves more markedly or prove greater helps or hindrances than in business in which a man's attitude becomes either an asset or a liability. So important do I

The facts of heredity, to whatever stage of completeness and accuracy it shall be deemed feasible to develop them,[1] are in turn to be supplemented by information concerning physique.

In a study which he made of one thousand and thirty-seven executives, a group which was not confined to business but included governors, United States senators, mayors of leading cities, university presidents, bishops, etc., as well as merchants, manufacturers, insurance company and railroad presidents, the author found 71.4 inches the average height,[2] and 181.1 pounds the average weight. When these averages were compared with similar statistics secured from intellectuals, men such as authors, artists, philosophers, psychologists, and inventors, the executive was found to exceed the intellectual by .7 of an inch in height and 18.2 pounds in weight.[3]

We may quote as follows from the work in which these statistics have been presented:[4] "In noting the favorable relationship between these important executives and their size, one is led to inquire if there may not possibly be some connection between the executive's physique, as measured by height and weight, and the importance of the position he holds. Upon this question some interesting

consider the temperamental qualifications of a man that I employ no one for a position of responsibility in our organization until I know him personally, and can establish the sort of personal relationship that alone can lead to an adequate understanding of an individual. His schooling, his experience in business, his home life, his associations and affiliations, indicate his temperament and the influences that have molded and directed it. And all of this information is vital not so much because it shows a man's training for one specific task, as because it shows the discipline and influence to which he has been subjected and which will find expression in his attitude towards and aptitude for the large responsibilities ahead of him." *System*, November, 1913, p. 539.

[1] The problem implied here is to be discussed in the following chapter. *Cf.* especially pp. 105 ff.

[2] This includes shoes.

[3] The results will be found presented with some detail in the author's *The Executive and his Control of Men*, pp. 23–33, 314–335.

[4] *Ibid.*, pp. 31–32.

data have been collected, and although the results are not as conclusive as one might desire (see note on page 85), they are still well worthy of consideration.

"Statistics have been received from preachers in small towns and villages where the total amount raised for church support was under $1,000 annually; presidents of small colleges whose enrollment was under two hundred and fifty and annual budget under $12,000; principals of small public schools whose monthly salary did not exceed $75; county attorneys from six different states; salesmen of typewriters; and station agents in town not exceeding five hundred inhabitants.

"In no way is it to be implied that stigma attaches to any of these men. They are merely filling less important positions than the bishops, university presidents, city school principals and others with whom they are compared. Their respective heights and weights are as follows. (See Table VIII.) In each case the larger position is held by the larger man."

It does not suffice to consider merely size and weight but, as is evident from the high rank which was accorded health in the list of fourteen qualities, functional vigor deserves a close consideration. The interviewer is able to estimate this in a more or less superficial way, a method which has been judged too inaccurate and otherwise untrustworthy by the considerable number of firms who have instituted the policy of medical examination of applicants. While the medical departments as a rule have been installed for a variety of reasons they have proved of much value in connection with the selection process. Since the medical examination, correctly administered, surpasses by far in its ability to estimate the applicant's physical status the diagnosis of the average interviewer, it accordingly would seem an instrument well adapted for use in the selection of executives.

TABLE VIII

PHYSIQUE IN RELATION TO POSITION [1]

Class	*Height*	*Difference*	*Weight*	*Difference*
1. Bishops	5 : 10.6		176.4	
2. Preachers Small Towns	5 : 8.8	1.8 in.	159.4	17.0 lb.
3. University Presidents	5 : 10.8		181.6	
4. Presidents Small Colleges	5 : 9.6	1.2 in.	164.0	17.6 lb.
5. City School Supts	5 : 10.4		178.6	
6. Principals Small Towns	5 : 9.7	.7 in.	157.6	21.0 lb.
7. Presidents State Bar	5 : 10.5		171.5	
8. County Attorneys	5 : 10.0	.5 in.	162.4	9.1 lb.
9. Sales Managers	5 : 10.1		182.8	
10. Salesmen	5 : 9.1	1.1 in.	157.0	25.8 lb.
11. Railroad Presidents	5 : 10.9		186.3	
12. Station Agents	5 : 9.4	1.5 in.	154.6	31.7 lb.

[1] The averages given in the above table were computed directly from the original schedules, but for the benefit of those who may wish to apply more refined methods to these data the items have been arranged in frequency tables (class intervals 1 in. and 10 lbs. respectively) from which the following have been deduced:

Class Number	*Number Cases*	*Average Height*	*St. Dev.*	*Dif. in Inches*	*Number Cases*	*Average Weight*	*St. Dev.*	*Dif. in Pounds*
1	81	70.8	2.4		82	178.2	26.9	
2	30	69.2	2.7	1.6	31	160.5	21.1	17.7
3	58	71.2	2.4		61	183.9	23.0	
4	26	69.7	1.7	1.5	26	165.4	25.5	18.5
5	25	70.3	1.8		26	180.0	22.2	
6	28	69.5	3.0	.8	29	159.5	21.7	20.5
7	38	69.5	2.7		37	173.1	25.1	
8	31	69.1	1.8	.4	31	156.3	14.1	16.8
9	23	69.5	2.1		23	184.6	19.7	
10	50	68.5	2.1	1.0	54	159.1	19.7	25.5
11	53	71.3	1.9		54	188.1	23.4	
12	30	68.8	2.4	2.5	29	156.4	19.8	31.7

Another factor to be considered is that age affects weight, and since the two groups compared are not of the same age a correction should be made in this respect. In the *Medico-Actuarial Mortality Investigation* the data are presented upon which a rough approximation of this correction may be made (page 13). The younger group in each case is the second and as weight

With a view to determining in a general way the extent of such use of the physical examination among firms of high grade which already possessed medical departments, the author corresponded with the medical directors of the following companies:

Cheney Brothers	S. Manchester, Conn.
Eastman Kodak Company	Rochester, N. Y.
General Electric Company	Schenectady, N. Y.
B. F. Goodrich Company	Akron, Ohio.
International Harvester Corp.	Chicago, Ill.
Metropolitan Life Insurance Co.	New York City
National Cash Register Co.	Dayton, Ohio.
Prudential Life Insurance Co.	Newark, N. J.
John B. Stetson Company	Philadelphia, Pa.
Travelers Insurance Company	Hartford, Conn.
Underwood Typewriter Co.	New York City.
Western Electric Company	Chicago, Ill.
Westinghouse Electric & Mfg. Co.	E. Pittsburgh, Pa.
Winchester Repeating Arms Co.	New Haven, Conn.

The replies of the medical directors tabulated indicate these facts in regard to examination and reëxamination, particularly with reference to whether the officers of the company were or were not exempt.

during the periods under consideration increases with age, these corrections may be deducted from the weight differences shown in the table: Preachers 1.5 lb., presidents colleges .4 lb., principals 6.8 lb., attorneys 4.1 lb., salesmen 5.9 lb., and agents 8.1 lb. These corrections are based upon the average age as shown in the statistical summary, pages 320–323, and, as will be recognized by those familiar with more refined methods, are rough approximations.

Item	*Number of Cases*
Total numbers of firms	14
Medical examination given applicants [1]	13
Exemptions allowed executive applicants [2]	5
Medical reëxamination of employees [3]	3
Exemptions allowed executives [4]	2

Of the firms administering the medical examination to applicants, it is evident, approximately two-thirds require that the candidates for executive positions shall be tested similarly. The proportion which provide for reëxamination at stated periods is less than twenty-five per cent and of these only one firm, apparently, is testing the physique of all its executives according to a regular system.

The chief defect of the physical test as administered by these firms is well illustrated by this statement from

[1] This one firm now administering no medical examinations for applicants writes: "The process is due to begin in the very near future but probably will not include the officials."

[2] One firm states, "We have not required the department heads or our officers to undergo our usual physical examination. This is for the reason that we find that a very large majority of our upper organization undergo a regular physical examination at the hands of their physicians."

A second firm stated, "We believe that it is feasible and advisable for a corporation to require the same medical examination of all applicants for employment irrespective of the grade of position for which they apply. We also believe that it is advisable to include all officials in the reëxaminations unless perhaps the highest executive officers are excepted. We certainly think that persons appointed directly by the officers of the company should be required to pass the same examinations that are required of those who seek employment through other regular channels." This firm was not included here, however, since it was not their practice, further investigation developed, to require such examinations and reëxaminations of executives.

[3] Two additional firms were about to institute reëxaminations at stated periods, one of them planning to include all officers.

[4] One of these two companies has a plan which, while it is optional with the officers, comes very near the no-exemption class: "It is our custom to conduct an annual physical examination of all superintendents and foremen on the theory that this group being the back bone of the organization it is especially important that their health be supervised and conserved as much as it is feasible to do so. I can say that about 90 per cent of all superintendents and foremen avail themselves of this opportunity and are examined by the medical department."

a medical director whose firm has no system of reëxamination: "If a new executive were to be appointed from outside our organization, naturally his physical condition would be considered. As a matter of fact, however, all our executives have been developed from within the organization"—which means that there are really no physical tests for these executives.

In considering the situation thus disclosed it is well to recall that these fourteen firms are not typical of the large number of industrial and commercial establishments in this country but are of the highest rank, all decidedly above average. The inadequacy of the average firm's knowledge of its executives' physical condition is apparent; its medical department does not as yet carry on systematically the simplest of the many constructive measures which might well come under its jurisdiction.[1]

[1] The medical director of one of these firms takes this advanced, but very proper, stand: "I would say that we made it a rule to examine the department heads and high-priced employees even more thoroughly than the rest of our employees. It is self-evident that the higher the grade of employee, the greater the risk of the employer, and for this reason we considered it poor judgment not to lay stress on their physical condition.

"Because of the amount of work we have been doing, we have not undertaken a wholesale reëxamination of the employees, but a number of superintendents and other officers have been examined by the medical depart ment."

Those interested in health service for firms may find the work performed by The Life Extension Institute, 25 West 45th Street, New York City, of helpful suggestion. Circulars descriptive of the service will be sent upon request made of its office.

It may be added that in cases where a medical department has been installed, a condition which is becoming increasingly common among business firms and which seems likely to persist, the examination of executives at the time of their selection and at such stated re-examinations as the firm may conduct need occasion no special difficulty. The chief medical examiner of one of the above companies in writing of reëxaminations states, "Several times when similar movements have been introduced the highest officials of our company have been in the first line. This has set such a good example to the lesser lights that we have experienced practically no difficulty." The medical director of an insurance company specializing in group insurance informs the author that the officers as compared with the rank and file are found unusually willing to coöperate. For instance, in one organization where opposition was developing to the proposed examination of employees the president announced, "I want to be the first man ex-

In much the same way that the physique is more searchingly studied by medical examiners than by interviewers, do mental tests in the hands of the skilled psychologist yield a more accurate knowledge of those factors comprehended by the general term mind.[1] The reader must be referred elsewhere for an account concerning the very interesting history of the development of such tests and for a critical discussion of the four different methods of testing devised for purposes of selection:[2]

1. The vocational miniature. The work or some selected part of it is reproduced on a small scale.

2. The sample. The applicant is given a trial upon the actual work to be performed and his ability is judged by his success in this trial.

3. The analogy. A test is devised which requires supposedly the same psychological functions as the real work.

4. The empirical method. A variety of tests under varying conditions and with subjects differing in ability as demonstrated on the work concerned are administered, and the results compared in the hope that significant facts will be developed.

The application of these methods to the selection of the executive is a new problem upon which, as yet, but little has been done—upon which but little has been attempted, is possibly the fairer way of stating it. However, two examples may be presented as indications of the sort of

amined." The vice-president was second and the examiners experienced no further trouble.

[1] The claim is made by Professor Thorndike: "There is excellent reason to believe that it is literally true that the result of two hours' tests properly chosen from those already tested gives a better diagnosis of an educated adult's general intellectual ability than the result of the judgments of two teachers or friends who have observed him in the ordinary course of life each for a thousand hours." Cited by Hollingworth, *Vocational Psychology*, p. 211.

[2] Chap. III of Hollingworth's *Vocational Psychology* summarizes the history of tests excellently.

These four methods are described by Hollingworth, *ibid.*, Chap. V; and Münsterburg, *Psychology and Industrial Efficiency*, Chaps. VII–X.

thing that may be expected to develop more fully in due course.

In an attempt to rate the ability of the executives employed at the New York headquarters of a large corporation Mr. William Fretz Kemble submitted these executives to the following tests: [1]

Speed of thought	Personal opinion
Ethical views	Observation
Hard questions	General information
Writing speed	Estimating
Concentration	Comprehension
Mathematical speed	Patient analytical detail
Memory for names and faces	Tact

Of the fourteen tests only four revealed what Mr. Kemble considered significant results in the comparison between executives and clerks:

1. In the personal opinion test the answers to thirty questions such as "Do you believe that war is ever justifiable?" and "Do you believe it can ever be possible to build a tower ten times as high as the Woolworth Building?" in the case of the executives rated seventy-three per cent, in the case of the clerks less than fifty per cent.

2. In the general information test the answers to ten questions such as "Of what are bricks made?" and "About what is the present price of pig iron per ton?" in the case of the executives rated from eighty to ninety-five, the clerks averaging approximately fifty.

3. In the comprehension test the subject was called upon to follow certain rather difficult directions in connection with a diagram containing numerous small squares. The executives evinced an ability approximately twice the grade of the clerks in comprehending these directions.

4. In the patient analytical detail test ten problems in

[1] *Cf.* "No. 1, Standard Tests for Human Character," *The Engineering Magazine*, New York, for the tests in full.

arithmetic were set, such as "A manager wishes to introduce piece work and also do justice to the operators. In what time by exact calculation in seconds, should an employee perform an operation, provided it was found he took three hundred seconds, with one-third lost motion easily avoided? In this operation, he should receive a credit of fifteen minutes divided over a ten-hour day for setting up his machine. Give the answer in seconds, and drop the decimals or fractions of seconds in the answer." The average person was found to solve correctly approximately two of these ten problems, whereas a few of the executives attained a rating of ninety.

Upon the basis of their ratings made in these four tests Mr. Kemble ranked in order the executive of this corporation.[1]

Professor Walter Dill Scott who has devised a number of mental tests recently undertook the rating of nineteen executives connected with the organization of Cheney Brothers, South Manchester, Conn. The president of the company, Mr. H. B. Cheney, on the basis of his personal knowledge of these executives also ranked them in order of merit. The two methods show what it seems reasonable to regard as a very high degree of agreement. (See final column of Table IX.)[2] The correlation between these ratings was .93.

The mental tests enable the qualifications of the applicant to be determined quantitatively, a fact which in itself will do much to place the problem of selection upon its proper basis. General and meaningless expressions and the wide variations in the judgments of interviewers to-

[1] For a more detailed discussion of these tests as well as a chart showing the final ratings, *Cf.* W. F. Kemble, *Choosing Employees, by Mental and Physical Tests* (New York: The Engineering Magazine Co., 1917).

[2] For samples of Professor Scott's tests see his article on "Selection of Employees by Means of Quantitative Determinations," *Annals of the American Academy of Social and Political Science*, May, 1916, pp. 182–193.

TABLE IX

CORRELATION BETWEEN TESTS AND PERSONAL RATINGS

Official	*Ranks*		*Diff. of Ranks*
	By H. B. Cheney	*By Tests*	
A	1	2.5	1.5
B	2	.6	4
C	3	4	1
D	4	2.5	1.5
E	5	7	2
F	6	1	5
G	7	6	1
H	8	10	2
I	9	5	4
J	10	9	1
K	11	11	0
L	12	13	1
M	13	15	2
N	14	17	3
O	15	12	3
P	16	14	2
Q	17	16	1
R	18	19	1
S	19	18	1

gether with the lack of any definite check upon the selection process itself will gradually be eliminated upon the development and more general adoption of mental tests.

It may be well to point out, however, that with all due allowance being made, these tests are not tc be taken as adequate for testing candidates with respect to all fourteen qualities specified in an earlier chapter. In fact, these qualities, integrity, perseverance, initiative, coöperativeness and the others, are by the psychologists regarded as descriptive terms, general in their nature and in consequence subject to such further division as may be desirable. Were this process of division continued, the individual's full complement of reaction tendencies, multitudinous in number, would be presented in their correct but highly specialized form.[1] It is with the testing of such detailed constituents of human nature that the psychologists have concerned themselves and so far as the intellectual factor is concerned the tests devised have attained trustworthy results.

Yet the degree of intelligence possessed by the candidate for an executive position is only a part of the necessary equipment. Will he coöperate loyally with his fellow-workers? Is he dependable, open-minded, and of sound morals? Does he love business as a game and will he persevere until the things desired come to pass? Has he organizing ability? Such are the questions implied by the list of fourteen qualities and in regard to these as yet mental tests have no full solution to offer. Such tests do afford, however, a method of research by means of which, we feel confident, the consulting psychologist in due time will be enabled to lay before the prospective employer a reasonably complete and well correlated set of quantitative determinations concerning the candidates for an executive position.[2]

[1] Hollingworth, *ibid.*, pp. 58–59.

[2] As for the present, the words of Professor C. E. Seashore, himself a psychologist of note, are *a propos:* "The consulting psychologist does not yield unduly to pressure for results. One of his chief duties is to forestall the precipitous rush into extensive application of what may be at best but a

species principle. He will dare to say, 'I do not know,' even if it should take him years to search for the seemingly trifling fact. While we but little dream of the possibilities in command of applied psychology, there is in the present atmosphere entirely too sanguine a feeling in regard to what it can do at short notice. Instead of being hazardous at guessing, the consulting psychologist must have courage to demand that he have the privilege of making patient search before he prescribes. Thus he has to pass through the narrows with the dangers of dissipating his energies in aimless search for truth's sake on the one hand, and, on the other, the danger of hasty and ill-advised rush into practice." *Ibid.*, "The Consulting Psychologist," *Popular Science Monthly*, LXXVIII (1911), 288. *Cf.* also Hollingworth, *ibid.*, pp. 214–221; and Münsterburg, *ibid.*, pp. 126–127.

CHAPTER VII

The Problem of Selection Standards

The problem with which we are next concerned, the several methods of selection having been presented in the preceding chapter, is the degree of accuracy to be expected of these methods when applied.

A Chicago manufacturer, who incidentally held a humble position at five dollars a week twenty years ago but has since developed a certain industry which he founded until it now employs two thousand workmen in its seven factories, states thus his ideas on selection: "I usually know whether a man is our grade or not the moment he comes in the door. His head particularly interests me, and his mouth. Out of five or six, I usually make but one mistake." This last sentence is one to which it is desired to call special attention since it involves the problem of selection standards.

It is often assumed by business men, at least theoretically, that a standard is an exact measure; but as a matter of practice inasmuch as absoluteness in process or result very commonly cannot be attained, the standard is conceived as being more or less abandoned for the sake of expediency or, what is even more frequently the case, it is denied that a standard exists. The data concerning heights and weights presented in the preceding chapter may be taken as an illustration.

The average height of the 1,037 executives, it will be recalled,[1] was 71.4 inches, average weight 181.1 pounds. From the viewpoint of selection standards what do these

[1] *Cf.* p. 83

data mean? It has been assumed by some that the executive should be no taller nor no shorter, should weigh no more nor less, than this. Indeed, not a few have looked upon these statistics as possessing something of fatalistic import and they have been found, at times under conditions of some little anxiety, deciding that certain individuals could and certain could not become executives, because their stature as indicated by the data on height and weight did or did not agree with the given averages. Others, particularly certain reviewers who seemed not to have read with care that about which they wrote, in discussing these data stoutly denied that the evidence possessed any validity whatever, because as a matter of the critic's personal knowledge several small-statured men were successful executives, this counterevidence, so ran the usual course of reasoning, being decisive and absolute.

The records of their heights and weights as shown by the respective 1,037 individuals, however, were found to vary man with man. When tabulated according to classes whose intervals were one inch and ten pounds respectively, these individual data were summarized into the following frequency table. (See Table X.) [1] It is evident from these tables that a few executives were extremely heavy; but that most of them ranged in height from five feet nine to six feet one; and in weight from one hundred sixty to two hundred pounds. In other words, even were 71.4 inches in height and 181.8 pounds in weight taken as standards for the executive (which so far as these given statistics are concerned means the executive in general rather than the business executive in particular) these averages, it would still be essential to bear in mind, have been computed from items which themselves varied considerably, some being above and some being below said averages; and any attempt to employ such averages in a hard and fast way,

[1] Gowin, *The Executive and his Control of Men*, pp. 326–327.

TABLE X

FREQUENCY DISTRIBUTION ACCORDING TO HEIGHT AND WEIGHT[1]

Height in Inches	*Executives*	*Weight in Pounds*	*Executives*
61 —	3	100 —	1
62 —	1	110 —	4
63 —	2	120 —	22
64 —	2	130 —	36
65 —	6	140 —	85
66 —	34	150 —	80
67 —	42	160 —	144
68 —	93	170 —	165
69 —	114	180 —	145
70 —	150	190 —	127
71 —	156	200 —	85
72 —	176	210 —	66
73 —	110	220 —	49
74 —	74	230 —	18
75 —	39	240 —	3
76 —	16	250 —	14
77 —	14	260 —	3
78 —	3	270 —	4
79 —	1	280 —	1
80 —	1		
Number of cases	1037	Number of cases	1052
Average height	71.4	Average weight	181.1
Probable error	±.054	Probable error	±.58
Standard deviation	2.6	Standard deviation	28.1
Coefficient of variation	4	Coefficient of variation	16

in the sense of absoluteness and without regard to this fact of the variation of items as shown in the frequency tables, would be liable to prove disastrous.

It does not suffice, however, to predict the possibility of disaster. The problem remains as to whether the candidate's variation in height or weight is to be considered significant or a negligible quantity. Suppose, for purposes of illustration, that the height and weight of every successful business executive in industry were secured and upon being tabulated found to fall within the exceedingly close limits of five feet eleven and six feet one in height and one hun-

[1] The accuracy of the conclusions to be drawn from these figures is commented upon in the author's work above cited, footnotes, pp. 326–327.

dred and eighty to two hundred pounds in weight; moreover, that similar data were secured from every executive whose industrial establishment had failed during several years past and upon being tabulated were found limited

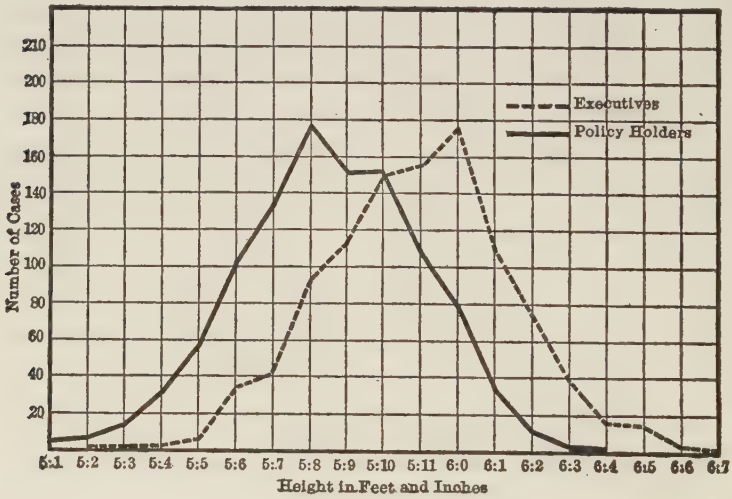


FIG. 8.—Executives and policy holders compared in height.[1]

sharply in height five feet three to five feet six and in weight one hundred and thirty to one hundred and fifty. Clearly here are two well-defined groups and upon the basis of the given assumptions would a corporation official not be justified in rejecting the applicant for an executive position whose height was five feet five and weight one hundred and thirty? Yet we need only compare the assumed data with the statistics under consideration to note how far short of the definiteness characterizing this hypothetical case falls

[1] The number of policy holders, 221,819, has been reduced proportionately to the same as that of the leaders, 1037; the frequency distribution being of course kept unchanged. The class interval being one inch, the above figures on height should be followed by a minus sign which has unintentionally been omitted.

the data actually collected. For one thing, data from bankrupts could not be secured; they failed even worse in responding to such requests than they did in business.[1] Failing this it was decided to compare the data secured from executives with those of the average man, the so-called man on the street. Unfortunately, no satisfactory data concerning the average man was to be secured, hence as a substitute, not in several respects satisfactory but at least the best that is at the present available, the insurance records of policy holders were taken. Even these could not be compared as desired with respect to weight so the comparison is confined to height alone. (See Figure 8.) [2] Instead of the closely restricted and distinctly separated groups mentioned in the hypothetical case, the curve indicates clearly a wide variation with considerable overlapping.

The variation which was observed in connection with the statistics of height and weight also characterize the judgments of the two hundred and seventy-six business men in their ranking of the fourteen qualities. Accordingly, it does not suffice to heed merely the respective positions of these qualities; the deviations in the judgments expressed concerning a certain quality should also be considered since these indicate the amount of leeway or allowance, to borrow a term from the machine shop, which should be made in their use for purposes of selection. For this reason, the average deviations in addition to the averages have been computed. (See Table XI.)

This table indicates that whereas judgment occupies first rank it was not so ranked by all the two hundred and seventy-six men. Some placed it second, third, fourth, even as low as eleventh in one case: and its average rating is 3.21. Around this average the different rankings varied, as has just been pointed out, some above and some below,

[1] Loc. cit., p. 322.

[2] Loc. cit., p. 30.

TABLE XI

THE ESSENTIAL QUALITIES OF THE BUSINESS EXECUTIVE

Rank	*Average*	*Average Deviation*	*Quality*
1	3.21	1.57	Judgment (Reasoning ability, accuracy in conclusions, ability to profit by experience.)
2	4.30	2.80	Initiative (Alertness, imagination, originality, independence in thinking.)
3	4.58	3.01	Integrity (Truthfulness, honesty, sincerity.)
4	4.71	2.72	Organizing Ability (Systematizing, classifying according to functions, planning and delegating.)
5	5.98	3.67	Health (Bodily vigor, good sight, hearing, etc., included.)
6	6.40	2.36	Perseverance (Industry, ambition, concentration.)
7	6.83	2.43	Aggressiveness (Energy, courage, domination by will.)
8	7.09	2.32	Open-mindedness (Reasonableness, teachableness, openness to new ideas.)
9	7.97	2.29	Coöperativeness (Unselfishness, kindness, cheerfulness, tact, loyalty.)
10	9.60	2.43	Competitiveness (Interest in playing the business game.)
11	9.81	2.56	Control of Emotions (Freedom from outbursts of anger or touchiness.)
12	10.30	2.37	Refinement (Courtesy, manners, general culture.)
13	10.51	2.57	Appearance (Well-groomed appearance, good carriage, pleasing facial expression, voice, etc.)
14	12.26	1.87	Sense of Humor

the average man reporting a ranking which was 1.57 places away from the general average of 3.21. This 1.57 indicates how closely the men were in agreement. In respect to only one other quality, the sense of humor, was the agreement approximately as close, this quality being placed fourteenth with an average deviation of 1.87 places. In

contrast with these two qualities, the ratings of health and integrity show much less unanimity, the average deviation being 3.67 and 3.01 respectively.

These averages and average deviations, however, are drawn from rankings made by business men who did not all have the same type of executive in mind. As has been pointed out above, four different executives were considered, viz., presidents of industrial corporations, purchasing agents, sales managers, and advertising managers. So far the ratings given have been of these four groups, but we shall now consider the returns in greater detail. (See Table XII.) These more detailed ratings shown in Table XII afford certain evidence bearing upon these two questions, (a) With respect to the qualities required is there a decided variation among different executive positions? (b) Is the agreement as to the respective importance of these qualities closer when the requirements of these particular positions are rated?

Certain differences are to be noted in an examination of these respective ratings. Whereas judgment, for instance, in the general averages was ranked first, for the position of president or of purchasing agent it was rated second. Similarly the advertising managers rated initiative higher than did the other business men, and integrity lower. Health, also, the advertising managers rated lower than did the sales managers. The purchasing agents placed aggressiveness considerably lower than did the others, and the same is true of open-mindedness. Less justifiable, it would seem, is the rating of organizing ability somewhat higher by advertising managers than it was rated for the position of president.

In regard to the closeness of agreement with which the qualities were rated, the average deviation as to judgment, for instance, was for president 1.65 places, for purchasing agent 1.21 places, for sales manager 1.37 places, and for

TABLE XII

ESSENTIAL QUALITIES

	Quality	General Averages Rank	Average	Avg. Dev.	President Rank	President Average	Avg. Dev.
1	Judgment	1	3.21	1.57	2	3.53	1.65
2	Initiative	2	4.30	2.80	3	4.86	2.09
3	Integrity	3	4.58	3.01	1	2.34	1.87
4	Organizing Ability	4	4.71	2.72	4	5.11	2.97
5	Health	5	5.98	3.67	5	5.93	4.36
6	Perseverance	6	6.40	2.36	8	7.15	2.64
7	Aggressiveness	7	6.83	2.43	7	7.09	2.41
8	Open-mindedness	8	7.09	2.32	6	7.08	2.39
9	Coöperativeness	9	7.97	2.29	9	7.64	2.36
10	Competitiveness	10	9.60	2.43	13	10.65	2.13
11	Control of Emotions	11	9.81	2.56	10	9.25	2.58
12	Refinement	12	10.30	2.37	11	10.44	2.56
13	Appearance	13	10.51	2.57	12	10.52	2.74
14	Sense of Humor	14	12.26	1.87	14	11.71	2.18

advertising manager 1.37 places, an average for the four of 1.40 places as compared with the deviation of 1.57 places shown in the general average. The last column of Table XII, which gives the average of the four average deviations, when compared with the average deviation shown in the fourth column from the left indicate that what has been pointed out as true of judgment prevails with respect to the other qualities as well.

The establishment of norms for various executive positions, it seems evident, is a task of which the above table represents merely a beginning. Since considerable work remains to be done before the requirements for various executive positions can be considered as fully standardized, it appears clear that meanwhile what lists of requirements or specifications are available should be utilized with a due regard to the allowance necessary.

The standardization of the interview is a subject which, in view of the wide dependence upon the interview for pur-

TABLE XII

ESSENTIAL QUALITIES

Purchasing Agent			*Sales Manager*			*Advertising Mgr.*			*Average of four*	
Rank	*Avg.*	*Avg. Dev.*	*Rank*	*Avg.*	*Avg. Dev.*	*Rank*	*Avg.*	*Avg. Dev.*	*Avg. Dev.*	
2	2.63	1.21	1	3.17	1.37	1	2.50	1.37	1.40	1
4	4.80	1.94	3	4.13	2.16	2	3.05	1.30	1.87	2
1	1.66	.99	2	3.40	2.36	4	4.66	3.06	2.07	3
3	4.30	1.76	4	5.11	2.94	3	4.20	2.50	2.54	4
6	6.50	3.70	5	5.41	2.82	8	7.20	3.28	3.54	5
7	7.00	2.40	6	6.48	2.22	9	7.60	1.76	2.25	6
11	9.20	1.72	7	6.88	2.11	6	6.37	2.71	2.23	7
9	8.20	2.22	9	7.88	1.89	5	6.11	2.33	2.20	8
5	5.09	2.34	8	7.87	2.71	7	7.07	1.93	2.33	9
13	10.00	2.40	11	9.85	2.42	10	9.13	2.50	2.36	10
12	9.31	1.05	10	8.96	3.07	12	10.33	2.13	2.20	11
8	8.00	2.80	12	10.72	2.24	11	10.20	2.40	2.50	12
10	8.36	2.39	13	10.80	2.41	13	10.56	2.92	2.61	13
14	12.42	1.38	14	11.75	2.44	14	12.71	1.18	1.79	14

poses of selection, has received as yet but very little serious attention. The experiments undertaken by Professor Hollingworth, however, deserve mention. While the reader must be referred to Professor Hollingworth's book [1] for a full discussion of these experiments, one of them will be cited as an illustration of the method employed.

In an attempt to answer the question "Is one who possesses a given trait in high degree a better or worse judge of that trait than is an individual in whom the trait is less conspicuous?" Professor Hollingworth first tested a number of students for the purpose of arriving at the degree to which each student possessed the traits in question, following which he conducted a test which purposed to indicate the "judicial capacity" of the various students. In both these tests the student judged himself and was also judged by others as to the trait in question. From these data two sets of correlations were prepared. (See Table XIII.)

"In the cases of neatness, intelligence, humor, refine-

[1] *Vocational Psychology. Cf.* especially pp. 41–53, 143–161.

TABLE XIII

SHOWING THE RELATION BETWEEN POSSESSION OF A TRAIT AND ABILITY TO JUDGE SELF AND OTHERS IN THAT TRAIT
(All coefficients are positive unless otherwise indicated)

Trait	*Judgment of others*	*Judgment of self*
Neatness	.22	.45
Intelligence	.49	.59
Humor	.59	.87
Beauty	.23	.15
Refinement	.38	.83
Sociability	.48	.47
Vulgarity	—.24	—.37
Snobbishness	—.33	—.27
Conceit	.19	—.22

ment and sociability," observes Professor Hollingworth,[1] "the coefficients are all positive and fairly high. Thus in the case of humor the coefficients of .59 and .87 indicate that that individual whom others consider humorous tends to be the most correct or representative of the group in her judgments of the humor of herself and of others. The coefficients of .49 and .59 in the case of intelligence indicate that that individual who impresses others as being intelligent is a good judge of intelligence both in herself and in others. The same is to be said of neatness, refinement and sociability. In the case of beauty the coefficients, although positive, are very low and hence not very reliable. They seem to indicate that in this case there is no relation of any sort between the possession of the trait and the ability to judge it.

"In the cases of the definitely 'undesirable' traits, vulgarity, snobbishness and conceit, the coefficients tend to be negative, and although none of them is very high, they suggest that the possession of these traits to a given degree tends to disqualify the individual to that degree as a judge of those traits, whether in herself or in others. These results also confirm the results in the case of certain of the

[1] *Ibid.*, pp. 159–161.

'desirable' traits, since vulgarity and snobbishness, with low or negative coefficients, are, grammatically at least, the opposites of refinement and sociability, which have high and positive coefficients.

"In general, then, our results suggest that, in the case of 'desirable' traits, ability to judge a quality accompanies possession of that quality, whereas in the case of the 'undesirable' traits the reverse of this is the case."

It is true that the subjects of these tests were college women and that the nine qualities specified are scarcely those upon which occupational success as an executive depends. Nevertheless, these tests are suggestive of the sort of study needed for the standardization of the interview.

While the work of investigators such as Professors Scott and Hollingworth shows how incomplete as yet is accurate knowledge of the essentials of an interview used for purposes of selection, it does afford assurance that the standardization of the interview constitutes a task capable of being undertaken in a definite way whenever the need for such standardization has impressed itself seriously upon business men.

We turn next to a consideration of the extent to which standards have been attained in the employment of the heredity test for purposes of selection.

The relationship between the candidate and his ancestry, it may appear, is readily to be traced and the information utilized without question; like begets like, according to the old proverb. Yet each individual is to a certain extent unique, exhibiting changes which prove not merely that the hereditary resemblance is incomplete but that the differences existing between him and his ancestors are such as cannot be accounted for by modifications of a somatic origin, exogenous and nontransmissible in nature, but rather

of germinal origin, endogenous and transmissible. Such differences we term variations.

The variations between parent and offspring may be either slight or striking, the procedure, stated in terms common to biologists, being either one of individual fluctuations in which species are slowly changed into new types or mutations in which new species and varieties are produced from existing forms by sudden leaps. The bearing of the mutation theory upon the use for selection purposes of data concerning heredity leads to a somewhat disquieting question: Granted that the candidate's ancestry is good, how are we to be certain that he himself, in consequence of one of these sudden leaps, will not be for our purposes an impossible genius or perhaps a "black sheep"?

It is not to be assumed that inheritance, it is true, even in the case of mutations, is without its more or less well-defined rules. The justly famous experiments of Mendel permit definite predictions to be made concerning the resemblance in certain cases between the offspring and either parent and any of the grandparents;[1] and matters such as blended, exclusive, and particulate inheritance have also been brought under the domain of rules, certain of these being well established statistically while others are as yet alternatives of expectation with varying degrees of probability. Yet as such they are to be regarded as holding true only in the sense of being average results observed in dealing with large numbers. The individual is not definitely predictable; and however confident be our belief that the offspring will in general exhibit certain traits, a "freak" or "sport" may unexpectedly appear.

[1] For discussion of Mendelism *cf.* Thomson, *Heredity*, *ibid.*, Chap. X; Doncaster, *Heredity in the Light of Recent Research*, Chaps. V–VI; Castle and others, *Heredity and Eugenics*, pp. 18, 40, 85, 100, 104; Davenport. *Heredity in Relation to Eugenics*, Chap. II; Bateson, *Mendel's Principles of Heredity* (Cambridge: The University Press, 1909). The latter work is the more complete and authoritative.

Needless to say, it is the individual in which the prospective employer's interest primarily centers; his concern in the applicant's family stock is, at most, derivative from this primary interest. Accordingly, it seems feasible in dealing with heredity as a factor in the selection process for business men to concentrate upon the sort of information specified by Professor Castle in an earlier chapter, with the emphasis placed upon those elements of the candidate's business record which serve most faithfully as indices of inherent capacity. With respect to this latter procedure, what the prospective employer seeks to do is to separate as well as he can the twin influences of nature and nurture, and having thus with respect to one factor rendered other things equal—to employ a Spencerian phrase—estimate the sufficiency of the hereditary equipment with which the candidate is possessed. Viewed in this light, the providing of the desired technique is a problem whose solution can be approached in either but preferably both of these ways: (1) Means for a correct appraisal of an executive's contribution to the company. This appraisal can be approached directly, as will be pointed out in a later chapter, and its evidence stated in terms of dollars and cents. (2) Means for supplementing the business record and thus lengthening the period under which the person's hereditary equipment shall be submitted to study.

This second phase of the problem, comprising as it does the facts of inheritance as the term is applied in its narrower and more strictly technical sense, proves a difficult one upon which to obtain reliable information. This has been found to be true in England, even in the case of such distinguished personages as the Fellows of the Royal Society; [1] it may be expected even more so to be true in this country, particularly with respect to business men, whose natures, it seems, are not congenial to passion for genealogical re-

[1] *Cf.* Galton's plaint in *Noteworthy Families*, p. 10.

searches. Moreover, it appears from what has been said of the nature of inheritance that some little expertness, at least, is to be required not merely in the collection of the information but in determining its significance. While the implications here are that the services of some one expert in handling such material would be necessary, it appears further, owing to the nature of the problem itself, that a few minutes' testing by such expert stationed in an adjacent laboratory (a process analogous to the medical examination as now administered) would not suffice. The facts of heredity are too deeply buried in the germ plasm for such brief laboratory test to reveal them. They must be sought objectively by trained field workers.

For some years past the Carnegie Institution of Washington in its Department of Experimental Evolution located at Cold Spring Harbor, Long Island, has been training such field workers. The course is conducted under especially favorable circumstances inasmuch as all the family pedigrees, thousands in number, collected by the Eugenics Record Office are accessible to these students and their training is under the personal direction of Dr. C. B. Davenport, the leading American authority in this field. Following the completion of their course these students have taken positions in various parts of the United States and it is accordingly merely a matter of time until such trained field workers will be available for the securing of information bearing upon the inheritance of candidates born and bred in any part of the country. The charge made for securing such information and giving it the critical interpretation desired will be only a few dollars and the scientific accuracy of the work will be maintained through supervision of the field workers by the home office at Cold Spring Harbor.

It does not seem possible, however, in view of the mongrel nature of the average person, the knowledge all too

limited as yet of inheritance in general, and the far from complete information desired concerning the candidate's inheritance in particular, to regard the heredity test at present as standardized. Consequently those utilizing this test in the selection of executives should recognize its present tentative state and avoid a dogmatic spirit in its application. Considered as an *indicator* it has a value, but in the hands of a man wedded to a theory of predestination its results could scarcely fail to prove mischievous.

In a general way what has been said of the heredity test is also true of the development to date of mental tests. The tests which have been devised so far are restricted in the main to what may be termed the intellectual factors, and as such are incomplete since the instinctive, emotional and volitional elements are of decided importance in the executive's work. Nor has it yet been demonstrated that these important nonrational determinants of executive capacity correlate so closely that the intellectual tests may be taken as indices of the degree of their possession. Furthermore, the data secured of a certain candidate by the present tests cannot be checked against standards so that the significance of his variations may be determined, for the reason that such norms have not yet been developed nor can they be developed short of years of intensive work.[1] Complete and accurate mental tests, the sort desired for purposes of selection in the case of executives, are in consequence a matter of confident expectation rather than present realization.

The four tests which have been so far discussed, and which, it may be added, are much more complete and searching than those commonly employed, have been

[1] Hollingworth, *Vocational Psychology*, p. 218.
The views of the late Professor Münsterburg coincided in the main with those expressed by Professor Hollingworth. *Cf.*, *ibid.*, *Psychology and Industrial Efficiency*, pp. 126–127.

found in each case not yet standardized. The interview, the physical test, the heredity test, and the mental test are being studied according to methods which we confidently believe will in the course of time render them entirely trustworthy instruments, yet meanwhile their use for purposes of selection should proceed with a due regard to their present incompleteness and their inability in consequence to yield precise results. It is for this reason that statements such as the following by Harrington Emerson, the efficiency expert, are especially mischievous: "To what extent, any way, at any time, in any department of human activity is the proper person for a position scientifically, perfectly, and infallibly selected in advance?

"When I buy and test belting or steel wire or babbitt on specifications, I am not taking any chances. When the United States Government supervises the manufacture of marine boiler plate and of anchor chains, it is not taking any chances. When I specify a Burroughs Adding Machine I am not taking any chances. Also, when I specify in advance the qualities required for a particular position and then find the person with the qualities, I am not taking any chances.

"Is it possible to predetermine the essential qualities for positions? Yes. We can make an elementary beginning by specifying health, intelligence, honesty and industry.

"Is it possible by analysis and test to select applicants with the essential aptitudes? Yes. Health, intelligence, honesty, and industry are not beyond predetermination.

"If this is possible, organization becomes a definite science, as much as bridge or boiler designing and construction." [1]

Even granting that the purchasing agent, owing to his dependance upon specifications, is not taking any chances,

[1] Cited by E. St. Elmo Lewis, *Getting the Most Out of Business*, p. 6.

the assumption that the selection of employees in its freedom from error is comparable to the purchase of marine boiler plate or a Burroughs Adding Machine is little less than ludicrous. The final conclusion drawn from these assumptions is equally fallacious. Needless to say, it is not because of the thing sought, the accurate selection of employees, that statements such as these should be criticized but because by asserting prematurely the solution as reached they hinder in a most mischievous way the attainment itself. The man convinced that a fixed correlation exists between rubber heels and dishonesty seeks no further, and only when he has put away such childish things can he attain the truth which makes him a reasonably accurate judge of men.

CHAPTER VIII

Experience and Training

It is popularly supposed that in the selection of an executive the unknown candidate is ushered into the presence of the captain of industry who thereupon, with a swift, intuitive glance, reads his innermost nature and accepts or rejects him upon the spot. The methods of the Chicago manufacturer mentioned at the opening of the preceding chapter are illustrative of this sort of selection process and may be taken as typical of the many stories passing current among business men regarding this so-called mysterious faculty by which men of superior grade are to be chosen.

While it is not intended to deny the rôle of intuition, particularly that which passes for intuition because in the rapidity of the reasoning process the steps are obliterated, there is no doubt that an untrained intuition is a dangerous guide and that the progress of scientific management is marked by the substitution of definite methods based upon experiment and record for these interesting but by no means always reliable impulses from the subconscious. It will be recalled, to revert to the case of the Chicago manufacturer once more, that he admits making one mistake in every five or six instances, although one might well wish to discover how he knew the proportion is not one to three or four.

The discussion in the four chapters which have preceded has concerned itself with the means by which an intuition commonly builded of phrenological and physiognomical

lore intermixed with much inconclusive and uncritically accepted experience might be, if not supplanted, at least supplemented by better interviewing and the use of physical, heredity and mental tests. What we are now concerned with is that the selection problem have its correct setting.

As a policy of management the corporation's officers are commonly found to hold certain views upon the question whether in securing executives the firm shall or shall not draw from outside its own ranks when vacancies occur. In considering with a number of firms the methods which they employ in the selection of executives, the author sought evidence as to the source of supply, to use the employment manager's phrase, of the candidates. Incidentally, some of this evidence can be presented statistically [1] (See Table XIV.) Over one-half of the department heads had been subordinates within their respective departments and their selection was a matter of promotion only. Ap-

[1] The information presented in Table XIV has been obtained from the following corporations, although, it may be added, the data as a rule do not include all the executives of any one company:

American Brass Company,
American Steel Foundries Company,
American Stove Company,
American Vulcanized Fibre Company,
American Writing Paper Company,
Automatic Electric Company,
Borden's Condensed Milk Company,
Buick Motor Company,
Consolidated Wagon and Machine Company,
Colorado Fuel and Iron Company,
Gottlieb-Bauernschmidt-Strauss Brewing Company,
J. I. Case Threshing Machine Company,
Indian Refining Company,
Locomobile Company,
New York Dock Company
Pittsburgh Plate Glass Company,
Standard Sanitary Manufacturing Company,
Standard Underground Cable Company,
The Studebaker Corporation,
United States Envelope Company,
United States Gypsum Company.

TABLE XIV

THE SOURCE OF SUPPLY

Department Head	*Promoted from subordinate position within own dept.*	*Transferred from another Dept. of own organization*	*Secured from outside organization*	*Total*
Purchasing Agent ..	4	2	0	
Factory Supt.....	2	2	3	
Employment Mgr...	1	1	0	
Chief Accountant ..	5	0	1	
Office Manager	2	1	0	
Credit Manager....	2	1	1	
Sales Manager.....	6	1	0	
Advertising Mgr....	1	2	1	
Total.....	23	10	6	39
Higher Officials				
General Manager...	4	3	0	
President.....	6	7	4	
Total.....	10	10	4	24
General Total.....	33	20	10	63

proximately one-quarter had been transferred to their positions as department heads from elsewhere within the same organization. Less than a sixth had been secured from outside their respective organizations. With respect to the general managers much the same holds true although of the cases upon which information was secured none had been drawn from outside.[1] With respect to the presidents, while a somewhat larger percentage had been secured from outside, three-quarters of the appointments were in the nature of promotions. The average length of time these various executives had been connected with their respective firms before being assigned to their present positions was, it may be recalled from the data presented in an earlier chapter,[2] seven and nine-tenths years. In so far as the experience of these firms can be taken as

[1] It may be added here that in several instances the president held the position of general manager. In such cases the information was tabulated as pertaining to the president alone.

[2] *Cf.* p. 22.

typical (the cases, it will be noted, are only sixty-three) how considerably different from the popular idea of a swift intuitive glance being thrown upon the unknown candidate is this selection of a co-worker whose performance can have been under scrutiny for years!

While in several respects this simplifies the selection problem, particularly in that it tends to emphasize the value of certain selection methods not yet discussed, it raises another problem which, it may well be, is quite as difficult to solve. These men chosen to be department heads and higher officials were as a rule, along with many others who still so remain, once members of the rank and file. As such, they were paid small salaries because their values as assets were low, and they are now paid large salaries presumably because their values as assets are high. The idea that an organization should be considered a productive enterprise is very common yet from the viewpoint here urged such productive capacity is not to be regarded as of materials alone but also of men developed into valuable assets.

It is not meant to imply by this that a corporation's primary business is man building, a view which is frequently assumed, at times expressly stated [1] but which in the opinion of the author is unsound. But strictly from the standpoint of good business management within the corporation it is claimed that the increased asset values represented by the development of rank-and-file workers into executives deserves the consideration of the company's officials. The average employee begins at the bot-

[1] The Ford Idea in Education has been thus stated in a pamphlet bearing that name issued by the company (1917): "The impression has somehow gotten abroad that Henry Ford is in the automobile business. It isn't true. Mr. Ford shoots about fifteen hundred cars out of the back door of his factory every day just to get rid of them. They are but the by-products of his real business, which is the making of men. . . . Mr. Ford's business is the making of men, and he manufactures automobiles on the side to defray the expenses of the main business."

tom but becomes more valuable to the company as he nears the top.

Should this progress from lower ranks to higher ranks be left a matter of chance? The advance of a firm's product from raw materials to finished stock is not left to chance but, under the close control characteristic of scientific management, has its journey expedited at every possible stage. The old-times handicraftsman in his little shop did not need such methodology but the productive processes now existent are so complex and large in scope that only by careful planning, scheduling, routing, and follow-up can the organization fulfill its appointed function. Processes analogous to these which transfer the materials from rough stores to shipping room with maximum accuracy and expedition should be devised for the executive in embryo, or otherwise, under the burden of routine, the never-ending details connected with some one phase of production, sales, accounts, and finance, he may degenerate into a mere cog.

In a symposium on National Education published in 1901 certain English thinkers, after dwelling upon the changes which were being brought about in Great Britain's industry, predicted conditions whose advent the Great War has hastened:

"The struggle of the future must inevitably be between a number of great nations, more or less equally well equipped, carrying on production by the some general methods, each one trying to strengthen its industrial and commercial position by the adoption of the most highly developed machinery, and all the methods suggested by scientific research, policy or experience. Under these conditions, it is no longer possible for the individual merchant, or for small groups of merchants, to acquaint themselves, by personal experience alone, with more than a fractional part of the causes which affect the business in

which they are engaged. The spread of the modern industrial system has brought with it the modern state, with its millions of consumers, its vast area, its innumerable activities, its complicated code of industrial and commercial law. At the same time, the revolution in the means of transport and communication has destroyed, or is tending to destroy, local markets, and closely interwoven all the business of the world.

"Events in the most distant countries, industrial and commercial movements at first sight unrelated to the concerns of the individual merchant, now exert a direct and immediate influence upon his interests. The technical training of the factory or the office, the experience of business, the discharge of practical duties, necessary as they are, do not infallibly open the mind to the large issues of the modern business world, and can never confer the detailed acquaintance with facts and principles which lie outside of the daily routine of the individual, but are none the less of vital importance." [1]

The United States, quite the same as Great Britain, essays to play a foremost part in this era of world business, even though it requires a superior managerial ability and imposes a far more serious burden than heretofore upon the corporation officials responsible for its development. The school of experience, which sufficed during the era of small business affairs and in which most of the men advanced to high positions during the period of rapid corporate promotion had received their training, is, now that the distance between chief official and beginner has in the evolution of large-scale business so lengthened, too slow to suffice. Consequently, the problem faced by the corporation's officials is, having placed the candidate in the position justified by his ability, how best to accelerate his progress.

[1] National Education: *A Symposium* (1901), cited by Hewins, "Economics," *Ency. Brit.*, 11th ed.

The term commonly employed to connote all those various means employed for the acceleration of what normally takes place slowly as a process of the individual's experience is training. The bases of its claims for efficacy will appear somewhat more clearly if the nature of the reasoning process itself is first mentioned. Reasoning may be defined as purposive thinking which solves, or tries to solve new problems.[1] As such it differs from simple associative thinking, such as the house dog exhibits in scratching at the door, his usual means of securing entrance, even after he has witnessed the family depart in the motor car or workmen show in setting up a machining job at the usual feed and rate of operation irrespective of changed hardness in the steel supplied them. The bonds of concrete habits and particular associations are broken by the reasoner, however, since his method of attack enables him to deal with novel data.

The unaccustomed situation is not to the reasoning person a vague mystery before which he stands in bewilderment, but a mass into which he analytically carves his way in the search of what is for the particular purposes at hand the essential attribute. The item chosen, the abstraction, simplifies the situation and, provided it be correctly chosen, leads easily to the possible consequences. The problem at hand, accordingly, with its maze of concrete details and connections sufficient to lose a most hardy but uninitiated thinker, is not attacked *en bloc* but piecemeal and systematically. Heads of classifications, general principles, have been evolved; thinking becomes an organized procedure.

What we wish to emphasize here is the value of general principles as compared to knowledge of detail. In order to live the mental life at all people have long since been obliged to seek some avenue of escape from the distractions

[1] E. L. Thorndike's definition. *Ibid.*, *Elements of Psychology* (New York: A. G. Seiler, 1907), p. 267. *Cf.*, also James, *Principles of Psychology*, II, 329–330.

of a multiform daily experience, and their solution very commonly is a curious philosophy, crude, anthropomorphic, and unscientific, but able to secure them the relief desired. So we may account for such current superstitions as "A rainbow at night is the sailor's delight" and for the perennial popularity of such proverbs as "A bird in the hand is worth two in the bush." While these naïve elements of folk-thought serve a purpose, their inaccurate and at times misleading character has perpetually challenged the more thoughtful to undertake a better systematization. In the various departments of knowledge, consequently, such systematizers, commonly termed scientists, are at work. Their aim is to evolve principles at once more accurate and more comprehensive, it being the ultimate goal of science, as Karl Pearson puts it, to express the universe in shorthand symbols.

It was the view of Sir Francis Bacon, arrived at, it may be said, largely as a justifiable protest against the unproductive metaphysicians who had been dominating the world of thought during preceding centuries, that the true scientist should with a mind freed from all bias or prepossessions set about patiently collecting data, content to believe that the truth sought would gradually evolve.[1] This method advocated by Bacon also proved unproductive in practice, since it made of the thinker a mere collector, a sort of intellectual packhorse rather than a systematizer. Instead of starting with a mind *tabula rasa* and patiently groping through the labyrinths of detail, it has been demonstrated that the most effective way to master a subject is first to grasp clearly its general principles. This is not equivalent to saying that certain abstractions are to be learned by rote, since such parrot-like work never constitutes mastery; but the process is one in which under skilled

[1] *Ibid.*, *Novum Organum* (2nd ed., Oxford: The Clarendon Press, 1889). *Cf.* especially *Aphs.*, 36, 68, 97.

direction the learner recapitulates at vastly accelerated pace the evolution of a certain body of knowledge centuries, it may be, in the making. The young law student retraces in three years the essentials of a legal experience over which jurists have toiled some three thousand; the medical youth at the close of his four years' training knows the best of what has been done since Hippocrates; and the college graduate, from a cultural standpoint the heir of all the ages, in sixteen years has traversed in great thought strides the toilsome journey from cave man to contemporary.

In the attempt to apply this same sort of procedure, the mastery of a subject-matter through the intensive study of its general principles, to the training of the prospective executive much necessarily depends, it is evident, upon whether or not the business management through which he functions possesses such general principles. This is a matter which merits examination.

The individual corporation in the conduct of its business builds up gradually a valuable experience, an asset to which the name good will may be applied or, in terms of scientific management, the organization's larger brain. These valuable data are in part, of course, the product of trial and error but only in part; they represent as well much severe reasoning applied to the corporation's problems by those interested in it and responsible for its progress. In the form of production methods, office standards, credit ratings, sales plans, company policies, even *esprit de corps*, etc., these data constitute in large measure with most firms the enterprise's directive force. In the sense then of "a settled rule of action, an opinion or belief which exercises a directing influence on the life and behavior," to employ the definition of Webster, the corporation does possess in its management certain general principles; and to deny the validity of training is to assume that these principles evolved by the corporation in the course of its experience are not more val-

uable than the methods the novice would hit upon by chance.

Yet in the process of developing its principles of management the corporation is not restricted to its own necessarily limited experience. Outside are competitors and coöperators whose organizations are quite as alert, and whose contributions to the developing science of management only shortsighted and surface thinkers will ignore on the pretext that "Our business is different." [1] The business world, consequently, the multitude of corporate and other enterprises whose activities interrelate, is as one vast laboratory in which each day countless experiments are being performed. The experimenters themselves, these business executives, engage in this enterprise not alone that profits may accrue but from the joy which a creative mind, freed from rule-of-thumb and buttressed by principles, discovers in the application of a science itself.[2]

[1] Says Charles De Lano Hine, the organization expert: "The greatest present need is an antidote for the unwillingness of men to profit by the previous experience of others. It would be amusing were it not so expensive to watch the gropings of many corporation officers for methods to test efficiency. Ignorant of fundamental principles, intolerant of outside suggestion, unable to detect the analogy in other undertakings, they repeat the expensive experiments of the past."

[2] Quite correctly President Vanderlip points out that in the popular mind the motives of business men are often maligned. "I know leaders in the business world," he says, "who have as little concern for personal reward in what they seek to accomplish as would be the rule with men engaged in scientific research. These men are devoted to certain commercial ideals. The making of money happens to be inseparably connected with those ideals, but the making of money is not the great moving force. They are interested in the expansion and development of business, in the discovery of new fields of operation, and in the introduction of improved methods. Their interest in that work is no more ignoble than is the interest of any other specialist. Men who already have more than most ample means are not for personal gain pursuing business with an absorbing intensity. It is empire building with them, perhaps on a small scale or perhaps on a great one. Their lives are not sordid. They may be narrow, as the lives of all specialists are narrow, but the popular idea in regard to men whose lives are given to commerce, the view that these men are devoting their existence to mere money getting, is in great measure erroneous. They have the same high type of imagination which usually marks men who attain eminence in any other line of activity. They are, in a large way or in a small way, as may be de-

In developing a science of management, however, these business executives are not upon territory *de novo*. For the business organization is a group engaged in the collective struggle for existence and advantage, and as such its principles of operation are allied to those principles proved effective in the activities of various other social groups and which it is the task of sciences such as economics, biology, political science, ethics, technology, geography, sociology, and psychology both to develop and state. Since these subjects have undergone a long development with a consequent enrichment in their store of general principles, the younger science of business management by adopting and adapting certain of these principles from the older sciences is enabled to accelerate its own advance.[1]

termined by their environments, using qualities similar to those that make great statesmen, great scholars, or great scientists." *Ibid., Business and Education* (New York: Duffield and Co., 1907), pp. 34–35.

[1] Consider what a flood of light the following principles, drawn at random from these older sciences and few in number compared to the stock available, throw upon the problems encountered by the business executive.

"Evolution is a change from an indefinite, incoherent homogeneity, to a definite, coherent heterogeneity; through continuous differentiations and integrations." H. Spencer, *First Principles* (New York: D. Appleton and Co., 1865), p. 216.

"All plants and animals are engaged in a struggle for existence, in which selection takes place and the fittest survives." Darwin, *Origin of Species* (6th ed.; D. Appleton and Co., 1912).

"The entire nervous system may undoubtedly be regarded as a vastly complicated molecular mechanism." G. T. Ladd, *Outlines of Physiological Psychology* (New York: C. Scribner's Sons, 1892), p. 175.

"It is the essence of all consciousness (or of the neural process which underlies it) to instigate movement of some sort." James, *Principles of Psychology*, II, 551.

"Impulsive social action, as a rule, varies inversely with the habit of attaining ends by indirect and complex means." F. H. Giddings, *Inductive Sociology* (New York: Macmillan Co., 1901), p. 177.

"Tradition is authoritative and coercive in proportion as its subject-matter consists of belief rather than of critically established knowledge." Giddings, *ibid.*, p. 207.

"The causes of competitive profits originate in change and are important because it takes time to adjust economic relations to changed conditions." Seager, *Principles of Economics* (New York: H. Holt and Co., 1913), p. 121.

"At any given time, there is a point in the investment of labor and capital upon natural agents beyond which further investment yields a less than pro-

As is commonly the case with a body of data undergoing process of transformation into that condition of definiteness deserving the name science, the advance does not take place with equal rapidity at all points but is like a skirmish line moving forward over irregular terrain. For practical purposes solely, both because it expedites the systematization of business knowledge in general and particularly because it corresponds to more or less well defined phases of the organization itself, the data pertaining to management are to be classified under four heads: Production, sales, finance, and accounts. So far as these are concerned from the standpoint of scientific procedure, it probably is not far from correct to say that up to the present accounting has attained the most definiteness in its principles, following which comes production, finance and sales in the order named. That doubt arises at times as to correct procedure, which is equivalent to saying that its data are not an exact science, will be agreed by any thoughtful executive in these four departments.[1] The same is true, of course, of their *ensemble*.

portionate return." R. T. Ely and G. R. Wicker, *Elementary Principles of Economics* (New York: Macmillan Co., 1904), p. 129.

"The rules of the social game are respected by the many good men chiefly because they are forced upon the few bad." E. A. Ross, *Social Control* (New York: Macmillan Co., 1901), p. 125.

"The nations of our time cannot prevent the conditions of men from becoming equal; but it depends upon themselves whether the principle of equality is to lead them to servitude or freedom, to knowledge or barbarism, to prosperity or to wretchedness." De Tocqueville, *Democracy in America* (Translated by Henry Reeve, New York: Colonial Press, 1900), II, 348.

"Class codes of morals are sanctions, under the caption of ideals, of uncriticized customs; they are recommendations under the head of duties, of what the members of the class are already most given to doing." J. Dewey, *Ethics*, a lecture delivered at Columbia University in the series on Science, Philosophy and Art, March 25, 1908, p. 26.

"All rules of action for the guidance of life must be of possible social application, even though in their origin they are announced and urged by individuals." Baldwin, *Social and Ethical Interpretations in Mental Development* (New York: Macmillan Co., 1897), p. 524.

[1] The expert recognizes very well the inexact state of his own specialty although as an amateur viewing some other field he is apt to seize upon as settled truths conclusions which the experts of this latter field consider still

While it is true that the general principles of managing an enterprise which have been already established are of decided value, the individual executive finds equally helpful, in fact, in the less developed phases of business, even more helpful, the method of science. It supplies him a means of attack, a plan of procedure in dealing with the numerous and detailed problems arising continually in the day's work which are not yet standardized.[1] The work of Frederick W. Taylor, quite appropriately called the Father of Scientific Management, is therefore germinal in its nature; Mr. Taylor solved a few problems but above all he bequeathed a method of approach plus an inspiration for others to do likewise.[2]

in process. This attitude prevails not alone among business men but also scientists in general.

To an executive earnestly seeking the development of a science in management these words of Professor John Dewey bear comfort, concerning as they do the tendencies prevalent in a field long tilled by scholars: "Unstable equilibrium, rapid fermentation and a succession of explosive reports are thus the chief notes of modern ethics. Scepticism and traditionalism, empiricism and rationalism, crude naturalisms and all embracing idealisms, flourish side by side—all the more flourish, one suspects, because side by side." *Ibid., loc. cit.*, p. 19.

[1] *Cf.* the remarks of Charles M. Schwab, Chairman of the Board of Directors, Bethlehem Steel Corporation, on the value of a college education for purposes of business: "I am not against a college education. I never have been. Whatever may have been true in the past, there is no doubt that to-day industrial conditions favor the college man. Old crudities are disappearing; science is dethroning chance. Business is conducted on so vast a scale that the broadening effects of higher education gained through proper application, write a very large figure." *Ibid., Succeeding with What you Have*, pp. 30–31.

[2] That Mr. Taylor himself would agree with this estimate of his work appears in this remarkable passage, in which the Father of Scientific Management ranks himself a profound psychologist, or philosopher: "Scientific management," said he, "is not any efficiency device, not a device of any kind for securing efficiency; nor is it any group of efficiency devices. It is not a new system of figuring costs. It is not a piece-work system; it is not a bonus system; it is not a premium system; it is no scheme for paying men; it is not holding a stop watch on a man and writing things down about him; it is not time study; it is not motion study nor an analysis of the movements of men; it is not the printing and ruling and unloading of a ton or two of blanks on a set of men and saying, 'Here's your system; go use it.' It is not divided foremanship or functional foremanship; it is not any of the devices which the average man calls to mind when scientific management is spoken of. I am

Of the four principles enunciated by him,

"First: The development of a true science.
Second: The scientific selection of the workman.
Third: His scientific education and development.
Fourth: Intimate friendly coöperation between the management and the men," [1]

the three latter are in reality corrolaries of the first, since they indicate how the first broad generalization is to be applied. The analysis of this first principle in turn, particularly the explanations given by Taylor as to how it was to be applied, shows that which we really have here is what under other circumstances has been variously denominated scientific method, logical thinking, and reasoning. In so far as they can be separately distinguished without distorting the nature of the mind's operations, the steps in these processes are five in number: [2]

not sneering at cost-keeping systems, at time study, at functional foremanship, nor at any new and improved scheme of paying men, nor at any efficiency devices, if they are really devices that make for efficiency. I believe in them; but what I am emphasizing is that these devices in whole or in part are not scientific management; they are useful adjuncts to scientific management, so are they also useful adjuncts of other systems of management.

"In its essence, scientific management involves a complete mental revolution on the part of the workingmen engaged in any particular establishment or industry—a complete mental revolution on the part of these men as to their duties toward their work, toward their fellow men, and toward their employers. And it involves the equally complete mental revolution on the part of those on the management's side—the foreman, the superintendent, the owner of the business, the board of directors—a complete mental revolution on their part as to their duties toward their fellow workers in the management, toward their workmen, and toward all of their daily problems. And without this complete mental revolution on both sides scientific management does not exist." *Hearings before the House of Representatives Sp. Com. on The Taylor and Other Systems of Shop Management*, Washington, D. C., 1912, III, p. 1387.

Cf. also Taylor, *The Principles of Scientific Management* (New York: Harper Bros., 1911), and *Shop Management* (New York: Harper Bros., 1911).

[1] *Ibid.*, *Principles of Scientific Management*, footnote, p. 130.

[2] Dewey, *How We Think* (Boston: D. C. Heath and Co., 1910), p. 72.

Says Professor Dewey: "The trained mind is the one that best grasps the degree of observation, forming of ideas, reasoning, and experimental testing required in any special case, and that profits the most, in future thinking, by mistakes made in the past. What is important is that the mind

1. A felt difficulty.
2. Its location and definition.
3. The suggestion of a possible solution.
4. The development by reasoning of the bearings of the situation.
5. Further observation and experiment leading to its acceptance or rejection.

The method of scientific management, therefore, is essentially the method of the trained mind, and the distinctive contribution of Frederick W. Taylor, as the author conceives it, is that his efforts have advanced to a marked degree the cause of the business scientist.

The evidence as to the possession by the management of both general principles and scientific method would perhaps be most conclusive if presented in the nature of internal evidence itself. Since this in view of the space limitations and the relevancy of the topic itself does not appear feasible,[1] two brief items of evidence will instead be presented.

In studying the careers of twelve presidents and general managers previous to their attaining such positions, the author inquired concerning the respective departments in which these officers had had most experience. To use the employment manager's phrase, an answer was sought to the question as to the source of supply. The results are as follows, several of the officers specifying more than one department. (See Table XV.)

While these cases are too few to be conclusive in themselves, they suggest certain conclusions which observation seems to corroborate: Men advance to the higher executive positions from various departments, thus confirming the view previously presented that the requirements are gen-

should be sensitive to problems and skilled in methods of attack and solution." *Ibid.*, p. 78.

[1] In another work, *The Executive and His Control of Men*, the author has attempted to state these principles of management and at the same time set forth the methodology of the executive.

TABLE XV

DEPARTMENTS FROM WHICH PRESIDENTS AND GENERAL MANAGERS HAVE ADVANCED

Department	*No.*	*Department*	*No.*
Legal	1	Credits	4
Technical	2	Office Managing	4
Financial	3	Purchasing	5
Accounting	3	Works Superintending	6
Advertising	3	Sales	12

eral in nature. Furthermore, there appears to be a rough correlation between the number of men promoted from them and the degree of the unspecialized nature of the work required by the different departments. Legal and technical training has been drawn upon least, while works superintending and sales managing have been found considerably more prolific in preparing men for advancement. Were there no science of management results such as this, it seems, would not appear.

The test which the business man applies so commonly that it may almost be termed instinctive is that of, "does it work"; and the science of management he would rate by the profits attained through its aid and the salaries paid the men professing to possess such science. While this test in certain respects is narrow, no doubt, much could be said in its defense were this regarded as necessary. At any rate, with respect to the second test, the salaries received by those trained, some statistical evidence is here presented.

The New York University, School of Commerce, Accounts and Finance, has been for several years offering courses for the training of public accountants, bankers, manufacturers, merchants, stock, bond and produce brokers, fire and life insurance men, credit men, teachers in commercial high schools, consular service men, sales and advertising men, real estate men, and journalists. The course of study has been until the academic year 1916–

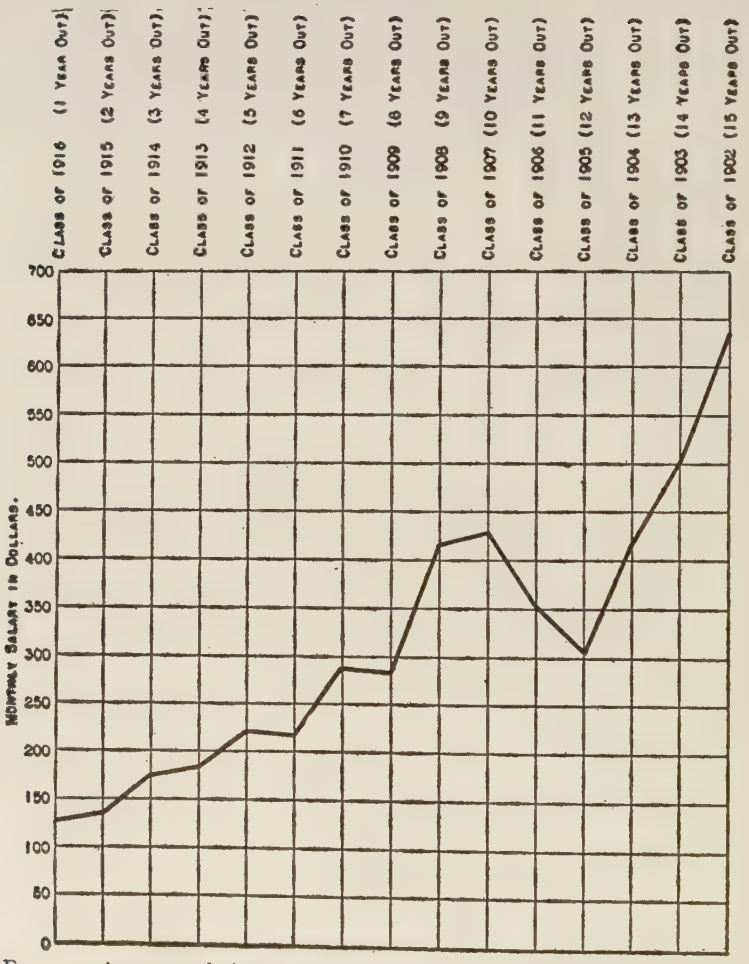


FIG. 10.—Average salaries of the graduates of the New York University School of Commerce, Accounts and Finance. The chart above shows the average monthly salaries of the members of each graduating class. The figures are derived from signed returns received from over 500 alumni.[1]

[1] The author is indebted to Mr. H. H. Huggins, Director of the Efficiency Bureau, New York University, for the above chart since the statistics were secured and compiled by him.

1917 three years in length and the students under consideration took ten hours of class work per week for thirty weeks each year, a total of nine hundred hours. Instruction was given in the late afternoons and evenings, practically all the students being engaged in business during the day. The requirements for admission to the school have been: (a) for the regular students a qualifying certificate issued by the Regents of the University of the State of New York or graduation from a high school giving a four year full course recognized by said Regents; and (b) for special students an age of twenty-one years or more and two or more years of satisfactory business experience. The salaries of the various classes average as shown in Figure 10. Although these statistics are not conclusive since no data are available concerning the salaries of young men similar in all respects save the attendance at the New York University, School of Commerce Accounts and Finance, it is believed that to those somewhat familiar with the earnings and rate of advancement attained by young men in business the figures are an indication worthy of note and corroboratory of the general argument here presented, viz., that for managerial effectiveness under present conditions, experience must be supplemented by training.

CHAPTER IX

Methods of Training

We have seen that much valuable knowledge pertaining to a firm's progress has been accumulated, while considerably more could readily be accumulated, and that, whereas left to chance the executive in the making comes into possession of this knowledge through the slow, expensive, and uncertain method of experience, the purpose of training is to accelerate this transmission of knowledge, to raise the executive to heights otherwise not reached, and to secure a greater uniformity of procedure. In order to attain these desirable ends in practice, certain methods of training need to be employed. Several of these methods will now be discussed, following which the results of an investigation into the methods now in vogue will be presented, and in conclusion some criticisms of these as well as suggestions for improvement will be made.

The most frequently employed perhaps of all methods is the plan of having the man under training serve as an assistant to a higher official. Hence in industry such titles as Assistant General Manager, Assistant Sales Manager, and Assistant Superintendent are very common. The assumption is that the chief, a man of ability who has very likely himself earned his promotion by advancing from this same position in the department, knows thoroughly the requirements of the position and the qualities necessary in an assistant department head. In practice, however, it is found that the relations between chief and assistant are necessarily personal as well as business, and that in

consequence matters of temperament count for much. The chief in selecting an assistant on the basis of the temperamental qualities involved possibly has secured an agreeable personality as a complement to himself but not a man with capacity for the advancement contemplated. Hence an estimate as to the value of an assistantship as a means of training the executive must depend in part upon the means used in any given instance for the selection of this assistant.

The position as assistant considered from the standpoint of its value as a method of training possesses this distinct advantage, it affords direct contact with the work itself. It must not be overlooked that the corporation's primary interest is not in training men *per se* but in getting certain work done at a given cost, the training program being of value because it expedites the attainment of such result. Accordingly, the opportunity here afforded of getting the work done has so engrossed the attention that the possibilities of training at the same time have not received the consideration warranted. The assistant takes hold of the work itself, his efforts can be closely supervised, his errors being corrected and suggestions given at the most appropriate time; and he presumably has at all times the inspiration of being near a master workman, his chief. Under conditions such as these growth in executive ability should be rapid. Yet such is by no means always the case. It does not necessitate extended investigation to discover that the superior officers of a corporation differ widely in their ability to develop men. Some are able, and take justifiable pride in so doing, to point to man after man whom they have "made"; others apparently are sterile, and of these not a few possess unenviable records, were their careers investigated, of the men whose abilities they have dwarfed.

In getting at the reasons for the above difference in the ability to develop men it seems that, whereas some officials in their intellectual operations flash from step to step so

quickly that they neither realize the slow pace of a novice nor are able to explain the matter to him, in many cases the present-day executives have attained their knowledge of business through experience alone and now possess it as an ill-assorted conglomerate, an intuitional mass whose operations we commonly term rule-of-thumb. Only by chance is the practice dictated by rule-of-thumb correct, and the training given the assistant by an executive of this school thus is practically certain to perpetuate wrong methods in business. Inasmuch as the chief often does not feel he can afford the time and effort required for explaining the reasons, even as he sees them, for a proposed operation, the training afforded the assistant is apt to be narrow, and however well it may have sufficed in the chief's case, inadequate for the era in which the assistant's powers are to reach their fruition.

It is not only the degree to which he knows business as a science which affects the chief's ability to train but the matter of attitude as well requires consideration. The chief, relatively speaking, occupies the position of power, and the possession of such power affords a subtle test of an executive's capacity in the qualities, good or bad, which it brings to the forefront. Possibly the chief likes to dominate and prefers to surround himself with mediocres in order that his own surpassing excellence may be all the more clear; or it may be that he has a fondness for flattery, a weakness which is indulged by the bestowal of proper rewards upon those who sing most loudly and long his praises; or again the chief seeks only ordinary talent in an assistant and forces out a man of capacity by withholding promotions and training because he fears the loss of his own position. Should an executive suspect, perhaps upon good grounds, that a competent assistant was being assigned him preparatory to his own forcing out or should he, at enmity with the organization, time his resignation in order that his leaving

might affect its interests most seriously, it is easy to surmise the quality of training afforded an assistant meanwhile. Nor should the contrary be overlooked, that assistants may be disloyal and attempt to supplant their superior officers, employing means worthy only of unlawful conspirators. It is true that the display of such traits by executives and assistants are properly regarded as reprehensible, and that the right sort of officers try to surround themselves with assistants of capacity, the view being that to do otherwise is to be disloyal to the company, the subordinate, and oneself. There is much to be claimed for this view, as we shall attempt to point out in a later chapter. We are concerned here, however, with the situation as it exists and there is not the slightest doubt but that the evils specified do prevail widely.[1]

[1] The usual arguments offered a chief in order to induce him to devote his best efforts to training an assistant L. Wertheimer, manager of several New York department stores, thus states: "In my stores I make it clear to the buyers that they endanger their positions more by not having well-trained assistants than by having them. I make it plain that, so long as they do satisfactory work, I do not want to let them go, and show them why it would be bad business for me to do so. In addition to this, I point out to them the opportunities for advancement, either in position or earning capacity, that exists for them in my plans for the future, and I make it plain to them that they cannot have these promotions unless they have trained assistants who can carry on the work from the points they leave off. The result is an organization that is built up something on the order of the German Army, the efficiency of which is unquestioned by fair-minded men, regardless of what other opinions they may have." *New York Times*, December 17, 1916.

Were the matter as simple as this manager attempts to indicate it would cause little difficulty, but unfortunately it is not. The executive functions most vitally in an organization during its periods of stress, when the enterprise is in its formative stage or when alternating periods of prosperity or depression threaten its existence as a going concern. Yet such conditions do not last always.

T. Coleman Du Pont in the following remark concerning his own activities supplies an interesting setting to the problem here considered: "The first thing we did was to amalgamate all the many different companies and the scores of sub-companies controlled by the Du Ponts into one corporation. This meant efficiency and economy in every department. The consolidated concerns were systematized and standardized and the best methods put into practice, departments created and the managers given responsibility and offered premiums for results.

"I knew nothing of the manufacturing of powder except the general chem-

It does not follow, however, that even though the assistant be selected and trained properly, enjoying the proper attitude of his superior officer meanwhile, that upon the latter's quitting his position the former should invariably be advanced. The particular method of organization which prevails has to be considered as a factor upon which the feasibility of such procedure depends. In a corporation's New York headquarters, to cite a concrete illustration, the secretary and the third vice-president were found in charge of duties organized respectively as follows. (See Figures 11 and 12.) It appeared to be a matter of common knowledge in this organization that were the secretary's position to become vacant the assistant secretary would be promoted, but that were the vice presidency open none of his four subordinates, each a competent specialist, would be elected to the vacancy.

Without doubt, in cases where an assistant is able to assume his chief's duties at any time, the payment to him of a salary somewhat above the compensation normally pertaining to his position can be justified on the grounds of

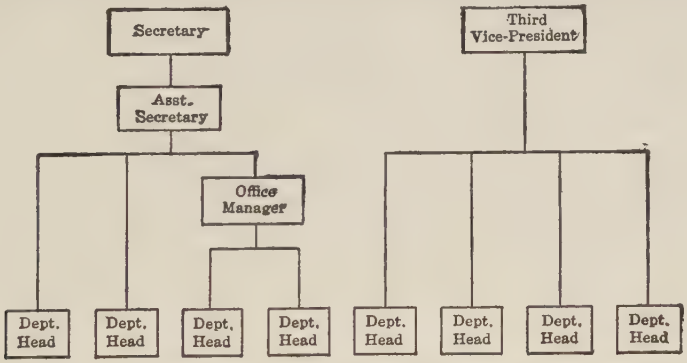
istry which I had learned at school. My cousins had this knowledge and experience. I was familiar, however, with the use of it commercially and had successful experience in organizing and systematizing several industries.

"We engaged the best men we could find. We paid six men very large salaries—and they were the cheapest labor we had, for their brains could make thousands for the company annually."

"Now that the building has been completed and its organization working smoothly, it does not call for my attention. I like conceiving, planning, organizing, systematizing and getting a project established successfully. Then I want to start something else. Just now I am out of a job." *Leslie's*, October 5, 1916.

Since Mr. DuPont is a multi-millionaire with varied interests, our sympathy need not be unduly exercised that in consequence of his organizing ability he rendered his own services unnecessary. But suppose he were an executive dependent upon his position? What we really have here is an opening up within the corporation of special opportunities, "pioneering" is the usual business term for it, with attendant rewards and attendant risks in the security of tenure with respect to these larger rewards. When the special opportunity has been exploited, some men prefer to move on to other companies, some try to locate other rich "strikes" within the same company, while others will drop back to their former spheres of responsibility and earnings. *Cf.* p. 187 ff.

insurance. The organization which has fortified itself with capable understudies to its leading executives occupies a more secure position. Yet it is obvious that the desirability of insurance varies not only with the degree of risk but with



FIGS. 11 and 12.—The plans of organization developed by two executives within the same corporation are here shown in contrast.

the rate of premium which must be paid. And it is here suggested that in businesses highly systematized, where the chief is a skillful organizer and perhaps as well considered a more or less permanent member of the staff, it may not pay to provide an understudy sufficiently competent to merit advancement to the department's headship at any time. Should the organization be small, even conditions opposite to these frequently will not justify the provision of competent understudies.

In an attempt to estimate the value of an assistantship as a method of training executives, we may conclude, these questions are pertinent:

1. Is the assistant's selection due to objective standards or personal idiosyncrasies?

2. Is the chief able to develop men?

3. Is the assistant's training based upon standards or rule-of-thumb?

4. What attitude is held by chief and assistant respectively?

5. Under the given conditions of organization can an assistant qualified for promotion be employed with profit?

The information disclosed by questions of which the above are typical indicates the value of this method of training executives, a value, needless to say, which varies according to factors such as the degree to which the industry is standardized, the *esprit de corps* prevailing within the particular organization and the types of personalities involved as chief and assistant. This value, moreover, is to be taken in a relative sense since whether or not this method should be employed depends upon what results are attainable by it in comparison with the other methods to be considered.

It is not unusual to liken a business organization to an army, there being an analogy, it is pointed out, between the way small units within each are builded into larger and the method as well by which authority passes step by step from the superior officer down the line until the rank and file is reached. There is much truth in this analogy, as even those industrial executives who oppose the so-called military type of organization will admit. Yet such discussion is inaccurate in that, while the lines of authority from superior to inferior are made prominent, little or no attention is paid to the fact that without additional influences the organization is not fused into a unit. This defect has serious practical consequences as corporation officials discovered upon taking charge of their vast combinations some years since; the industrial organization constructed upon the lines merely of authority and obedience proved when compared to the smaller units of competitors both unwieldy and wasteful. The large-scale enterprise had its advantages but since these were not being realized to the degree desired the

more progressive of these officials soon set about remedying the difficulty through certain modifications in the plan of management.

The need was felt for a higher degree of coöperation, both between subsidiaries of the corporation, between different departments of a subsidiary, and within the various departments themselves.[1] It was also seen that the officers elevated at the time of consolidation to positions whose scope transcended by far their former positions did not rise easily to the new demands, that of supervising the corporation's activities in the same close way to which they had been accustomed. Moreover, there were additional officers not admitted into the higher ranks of the new company who in the pre-combination period would have secured

[1] It is a natural tendency of the average department head to measure all the company's activities from the standpoint of his own speciality, and to assume eventually, unless measures are taken by which this warping influence may be counteracted, that the entire organization revolves about his particular department. Hence the credit man's arrogance in rejecting certain orders, possibly upon safe grounds so far as the likelihood of payment is concerned, which the sales department wishes to put through at once, the sales manager's naïve view that the production department's sole duty is to turn out the goods of which the sales organization has disposed, to mention two of many similar cases which, in the opinion of the general manager, like Banquo's ghost will not down.

The view held by the broader-minded department heads is well illustrated by this quotation from the reply made by Charles Austin Bates to a young man desirous of becoming a copy writer in an advertising department: "I have trained and attempted to train many copy-writers, and my most difficult task was to convince them that words were the least important part of their work—that first they must get clearly in their minds the kind of people who could use articles of the class to be advertised—why they should use such things in general—why our particular article should honestly be preferred in its class. Knowledge and conviction on these points can come only from concentrated study—first, of people and their needs and desires; second, of the article—its uses and how it is made; third, of the methods by which it must reach the user.

"The writer must have in his mind a clear and vivid picture of the whole operation of making, selling and using. Then if he is convinced that the article is superior and is desirable to the user—if he knows *why*, the words ought to come easily."

All the departments of an organization, in fact, are interrelated, and the effective specialist should accordingly possess much general knowledge in addition to his technique.

positions of importance with their smaller establishments but now feeling themselves shorn of personal initiative and authority were inclined to be restive under the changed conditions. Flexibility had been lost and individual initiative was not being enlisted to the extent considered necessary.

A device introduced, which, while it was not the only means utilized, has proved so successful in operation that practically every corporation employed it in some form, may be termed the conference method. It is true that the military organization has its council of war and that even in the case of small industrial concerns the manager was apt to consult subordinates more or less regularly, but the open recognition of the conference as a device of management and its assiduous cultivation is something recent for which our corporation officials deserve much credit. Since human nature has had the ground patterns of its interests shaped centuries ago under conditions of face-to-face relations it appears that when memoranda and printed instructions do not suffice to secure the results desired the feasible plan is to reinstate the personal contact. Inasmuch as the conference system is widely prevalent among directors and other groups of higher officials and is, according to the experience of numerous firms being successfully installed lower and lower in the ranks, it affords a rather common method of training the executive.[1] It is in this particular phase, of course, that our interest here centers.

[1] The experience of a prominent lithographing company in New York is worthy of note in this connection. All employees who have been with the company for fifteen years or more of continuous service are thereby elected to the honorary directorate. Whenever the company plans to set on foot a new enterprise, such as taking over a new plant or making some distinct change in plans, these honorary directors drawn from the ranks are present at the board meetings held twice a year and take an active part in the discussion and voting. It is felt that their long service and association with the company entitles them to a closer contact with its affairs, and the plan adopted has been found to disseminate a general confidence among all the employees thus represented at the conference. This leaven of official in-

The conference method, quite the same as the assistantship, concerns itself with the corporation's business affairs primarily, the training which it affords being in the main incidental. Hence the plan possesses a reality to the student executive. This reality, it is evident, depends considerably upon the conferee's feeling of responsibility as he takes part in the discussion. Should the chief officials use the conference in the main for purposes of announcing what they had already decided upon or should the conferees, having authority only to recommend, enforcement being left to others at the latter's discretion, discover that as a matter of record the recommendations submitted were being rejected without due grounds, the conference likely will not evoke any particular feeling of enthusiasm or responsibility. Those concerns which are utilizing the conference system most effectively do not permit higher officials to make of it an empty shell, some of them going to great lengths in assuring the conferee of his responsibility.[1] A solution

formation carried among the rank and file by the one hundred and fifty employees made honorary directors to date promotes in a very effectual way internal harmony.

[1] The Patton Paint Company of Milwaukee is one of these firms as is indicated by the following account of its plan of governing by the conference method submitted the author by the secretary of the company, Mr. Ludington Patton: "Our governing body is comprised of two Councils, the Office Council and the Factory Council. We have these two instead of one, because of divided interests—the Office Council, of course, being but remotely concerned with factory problems, and *vice versa*. All Departments are represented by their respective Heads at these Councils. Meetings are held weekly for each.

"The scope of these Councils is very broad, all questions appertaining to the organization being submitted to and decided by them, the majority of votes ruling. The separate functions of any one Department are not considered by the Councils, but any matter in which another Department is concerned is handled by the Councils. The Chairmanships are held in rotation, and minutes and accurate record of Committee proceedings are kept by the Secretaries, who hold permanent office.

"As stated above, all questions concerning classification of duties, hours, routine, production, etc., are submitted to these Councils and after being put to vote, the decision of the majority is final and obtains.

"It need hardly be said that we use perhaps more than ordinary care in selecting additions to our organization, giving preference to those who we

which has much to commend it is the assigning in a more or less definite way limits to the authority of each conferring group within the organization. Coöperation between the various groups may be secured by an arrangement whereby an official, possibly the secretary of a group possessing superior authority, serves as chairman of a group next in authority.

Yet even under such conditions it often occurs that not much business is transacted, the conference being rather a discussion prolonged interminably by certain wordy members, perhaps even a monologue indulged in by the chairman or possibly someone who has usurped the latter's functions. In consequence, the remarks made during the conference by no means always correlate closely with the members' ability in their respective positions nor is there provided the feast of reason which for purposes of training might be desired. Nevertheless, the opportunity for each to give his best and learn the most has been afforded, at least in theory, even though under the practical difficulties of the situation this has not been utilized. Very likely it is the chairman's fault, although successfully conducting a conference requires a degree of pedagogic skill somewhat beyond the usual qualifications of an executive.

The conference, as usually conducted and viewed from the standpoint of its efficiency as a means of training executives, performs its chief service in the development of cooperation and allied qualities. The student executive through his attendance comes to know his fellow workers and their problems, and how he may play his rôle as an

believe broad enough to appreciate and advance our standards. We consider our method an ideal one under which to operate, in fact, we believe it is the only one which will insure the absolute good-will and coöperation of the employees. Misunderstandings or disagreements of any moment are impossible because all grievances are adjusted promptly and adjusted according to their own sense of right or wrong. The organization is so perfect and the plan so efficient that we find little, if any, personal supervision necessary."

organization member more effectively.[1] These are no mean results in themselves. Moreover the conference affords the opportunity, often utilized in our leading corporations, for the appointment of committees, whose assignments, investigations and reports call for a high grade of intensive study, group criticism, and constructive effort.

A third method in certain aspects similar to the conference plan just mentioned is the use of study clubs within the organization. At times these clubs are conducted in the nature of debating societies, at other times as informal discussional groups or, perhaps more commonly, the members are addressed by some speaker, after which a general discussion takes place. As a usual thing these club meetings, as compared with the conference, are held outside working hours, are to a large extent controlled by the members themselves, and as a form of serious study very frequently are subordinated to recreational features. The subjects discussed do not as a rule bear so directly upon the day's work as is true of a conference, yet at the same time this permits a much more fundamental consideration of the factors involved.

In a small organization or in a large organization which is highly specialized, the subjects considered by the study club are necessarily somewhat general in nature in order to appeal to the diverse interests of the membership. While this serves excellently the purpose of training in coöperation and in providing a certain breadth of view, it does not afford the specific aid the members generally desire. With

[1] In speaking of the conferences which he was permitted to attend as a young officer of the Standard Oil Company, Mr. A. C. Bedford, the present head of the Standard Oil Company of New Jersey, recently remarked: "It was an invaluable experience for me to rub shoulders with these men daily at such an eventful time. I drank in the business and financial wisdom they had accumulated during several decades of activity in the handling of gigantic affairs. It was an inestimable privilege for a comparatively young man." *Leslie's*, May 3, 1917.

the requirements of the day's work foremost in consciousness, they are apt to be disinclined to consider general principles, particularly if these are presented as abstractions. A solution which has seemed to meet this difficulty very satisfactorily consists of meetings of specialists, the membership of the given association being not confined to any one firm but embracing such scope as its respective adherents decide. Typical of such associations are the following:

The American Society of Mechanical Engineers,
The Associated Advertising Clubs of the World,
The Economic Club of New York,
The National Association of Manufacturers,
The American Iron and Steel Institute,
The National Association of Corporation Schools,
The National Electric Light Association,
The Taylor Society,
The National Commercial Gas Association,
The Purchasing Agents' Association,
The Credit Men's Association,
The Executives' Club of New York,
The Detroit Executives' Club,
The Employment Managers' Association of Boston,
The Philadelphia Association for the Discussion of Employment Problems,
The Industrial Council of Rochester,
Chambers of Commerce (in various cities).

Necessarily among associations such as these considerable diversity obtains as to personnel of membership, scope from which the membership is drawn, place and frequency of meetings, the time and lengths of sessions, the prominence of the speaker, the nature of his address, and the character of the discussion.[1] In consequence, the efficiency of each association as a means of training must also vary, but that

[1] The activities of three of the above associations, to select these for purposes of illustration, are as follows: The Economic Club of New York in its membership represents upon the whole big business. Its meetings number four per year and are held in the evening preceded by a formal dinner. Dues per individual are $15 annually. Each meeting is devoted to some one subject of current interest. The speakers, usually five in number, are men of prominence.

The Employment Managers' Association of Boston endeavors through the

business men find in the meetings of such associations much of value is evidenced by the steadily increasing number of associations and their enlarging membership.

The spirit of coöperation upon which these associations depend for their helpfulness similarly renders possible the utilization of another method of instruction to an extent of which managers of the old school could scarce conceive, viz., inspection visits and trips. With certain railroads, for example, it has been the practice to send groups of operating officers, headed by a division or general superintendent, on tours of inspection of other roads. They travel in an official business car, examine all important terminals and points of interest, and upon their return render a report of their observations and of new features worthy of adoption. These reports are useful, but the greatest value of the plan lies in the extent to which it promotes the knowledge, enterprise and skill of the visiting officers. Needless to say, those upon whom they have called also have benefited.

Under the strict guarding of methods which has been heretofore in practice managers not infrequently resorted to the use of spies, and the present policy of more friendly give-and-take represents accordingly an ethical gain as well as an effective means of training. The recognition on the

media of meetings, discussions, industrial visits and committee work to aid its members in solving their personnel problems and in keeping them informed regarding the latest development and the best methods of handling employment work. The membership is composed of men in charge of the employment and personnel work of large commercial and industrial establishments. The annual dues are $20 per year, per firm. This includes the membership dues of one active member and of three associate members, all of whom have the privilege of attending the meetings and participating in the activities of the association.

The National Association of Corporation Schools, unlike the two associations above mentioned, does not confine itself to a local territory but includes in its membership the educational directors and others concerned with the training problem of corporations here and there throughout the country. Meetings are held annually, the sessions extending over three days. A report of these proceedings is issued to members together with a monthly publication. The dues are $100 annually per firm.

part of managers that even their competitors are not competing in every aspect of a business, the noncompetitive phases being fit subjects for the exchange of information; the perfecting of management as a science, thus enabling men in diverse businesses to learn more readily from each other; and the growth of the coöperative movement itself are among the factors upon which the increased utilization of this method of training can be predicted.

In several respects quite different from the training methods already described but nevertheless a plan which contains much of promise is the corporation school. It was found that the public schools necessarily gave a training general in nature whereas the service required of the employee by the corporation called for specific attainments. Inasmuch as only the corporation knew what these special requirements were and was primarily concerned in meeting them, it seemed obliged to supply the training through whatever means were found to be most feasible. The school maintained by the company itself, having demonstrated its value as a solution of the problem, has now become a characteristic feature of the training program of practically every large corporation. Among the courses arranged by the educational directors of the corporation schools we may note such as these:

Alternating-current apparatus,
Arithmetic,
Bookkeeping,
Comptometer operating,
Elements of electricity,
English to foreigners,
Personal hygiene,
Sales correspondence,
Salesmanship,
Stenography,
Switch-board operating,
Typewriting.

An examination of these courses, however, indicates that, although the material covered may be extremely valuable and the results attained by the instruction excellent, those pursuing such courses are in the main the rank and file, and not executives. It is true that executives earlier in their careers very frequently have taken these courses and doubtless with good effect; yet the corporation school when dealing with such material can scarcely be said to be engaged in the training of executives.

There are certain reasons why the corporation school to date has done so little directly in this respect. The school represents an attempt to apply to training the same principles of specialization of function and mass production which have proved effective long since in other departments of a business, particularly the works. Inasmuch as the executives in comparison with the rank and file are few in number, it appears wise for the school to concentrate first upon the sort of instruction needed by the large numbers. Moreover, the materials of instruction represented by subjects such as dealt with in the above courses are relatively well wrought out, and in consequence are workable in the hands of the instructional staff. The same cannot be claimed of the materials of instruction drawn from the company's managerial policies and elsewhere, which are desired for the training of its executives, which indeed are necessary if this training is to proceed expeditiously. It is accordingly difficult to secure instructors should a course for executives be contemplated, some higher official perhaps being pressed into service, but the instruction even with him being much more likely to be informal and conference-like than a systematic presentation of essentials. Typewriting and bookkeeping, to mention two courses presented successfully by many corporation schools, are pretty thoroughly systematized; the same is true of arithmetic and stenography, and the other subjects under the

close analysis and checks to which they are being subjected in progressive concerns are rapidly attaining a similar definiteness. But the methods employed by an executive the average educational director finds for purposes of instruction comparatively intangible, their results less definite and more difficult to check.

Nevertheless, now that a fairly well systematized methodology has been attained in the task of training the rank and file for their specified duties, those educational directors occupying the front ranks of their profession are reaching the conviction that developmental work as compared with fitting in work is the next forward step. In other words, they recognize that training men for advancement logically follows that instruction which fits them for specific tasks. Accordingly, the point is now reached in the formal training of executives when the importance of better foremanship is emphasized. Ways and means for solving this problem are being tested, and in due time courses for executives will be evolved by the corporation school. Certain organizations in which the operations have been more fully standardized are, in fact, already through their own schools systematically developing minor executives.[1]

The same specialization of function and mass production whose benefits are responsible for the development of the corporation school indicate the desirability of the corporation's coöperation with the public system of education, particularly the universities engaged in higher commercial education, in securing for its executives a training which the corporation's own school at present does not find it feasible to give. These commercial schools regard business as a profession and their faculties have as a chief aim the presentation of its principles systematically. "I know the

[1] The activities of the National City Bank in training men to become managers of its foreign branches and of the United Drug Company in training men to become managers of its various drug stores may be cited as typical of this sort of thing.

majority of business men trained in the school of routine work," says President Vanderlip of the National City Bank,[1] "will doubt the feasibility of teaching in the classroom, in a scientific and orderly fashion, those principles which they have gained only through years of hard experience and which they even yet recognize more by a sort of intuition than by conscious analysis. The engineers of an earlier day thought that blue overalls and not a doctor's gown formed the proper dress for the neophyte in engineering, but we have come long ago to recognize that the road to success as an engineer is through a technical school. So, too, I believe, we will in time come to recognize, though perhaps not to so full an extent, that the road to commercial leadership will be through the doors of those colleges and universities which have developed courses especially adapted to the requirements of commercial life."

The United States Commissioner of Education in his annual report for 1916 states that during the preceding year 109,697 students were pursuing commercial courses in high schools and commercial schools, an increase in the enrollment of some 60,000 over 1914.[2] It is estimated by the Commissioner that were a full report secured from all schools, including normal schools and universities, giving commercial courses the enrollment would exceed by far 425,000. Unfortunately the number of students in commercial schools of university grade has not been reported by the United States Bureau of Education for a number of years, hence the availability of such students as candidates for executive positions cannot be determined with any degree of accuracy. It is safe to conclude, however, from the number of commercial departments being opened in universities and the growth in registration of the better

[1] *Business and Education*, p. 29.

[2] *Cf. Ibid.*, II, 529. The statistics concerning increase are not strictly comparable due to the fact that whereas 3,618 schools reported in 1914 the number was 3,468 in 1915.

known institutions, that the increase in the enrollment of such students is going on rapidly. (See Table XVIII.) The curricula of these university schools of commerce are shown, usually in some detail, in catalogs issued by the respective institutions.

TABLE XVI

STUDENT ENROLLMENT IN CERTAIN LEADING SCHOOLS OF BUSINESS

School	*'08–'09*	*'09–'10*	*'10–'11*	*'11–'12*	*'12–'13*	*'13–'14*	*'14–'15*	*'15–'16*	*'16–'17*	*'17–'18*
New York University			1079	1240	1632	1879	2260	2822	4396	4228
University of Pa.	472	494	535	544	625	787	916	1085	1384	1023 [1]
Northwestern University	255	369	539	507	519	650	752	855	1017	804 [1]
Harvard University	80	91	94	97	120	117	166	190	232	
Dartmouth College	32	35	34	53	51	64	77	88	88	28 [1]
Boston University						274	378	825	1438	2195

These statistics refer to the respective schools of business and not to the enrollment of these universities as a whole.

In adjusting these graduates of commercial schools within the organization it is found that while their qualifications as a rule are excellent the young men are apt to impress their co-workers as too theoretical to be at once placed in positions of responsibility. In other words, while they know the principles of business management they do not yet possess the special technique necessary for the effective application of this knowledge within their organization. They still need training, although only of a special sort. The solution as worked out by a number of firms is that of assigning these men successively to various positions throughout the organization, the aim being to familiarize them within a brief time, perhaps six months or a year, with each phase of a firm's business and in consequence place them safely in a position of responsibility.[2] In case the

[1] Covers the first semester only.

[2] The Westinghouse Electric and Manufacturing Company of East Pitts-

student has pursued his commercial course while engaged in business at the same time, a plan which is made feasible by the considerable number of evening courses offered by our schools of commerce, this system of rotation may be rendered unnecessary inasmuch as at graduation he is also

burg, Pennsylvania, during the past sixteen years has enrolled in such a course over 2,500 graduates of technical schools. Its present plan contemplates first a careful selection of the student. Representatives of the company visit each year the leading technical institutions with which relations have been established, where promising candidates in the senior class are interviewed upon the recommendation of the faculty, fellow classmates, and especially of the men in the company's training school who knew these applicants as under-classmen during their own college careers. The careful investigation which each student undergoes before selection is supplemented by close checks upon his progress in the company's school, it being understood from the first that continuance with the course depends at all times upon the proficiency maintained both in his class and in his shop work.

In the shop course each student covers four manufacturing departments, spending approximately six weeks in each, and two testing departments, approximately three months in each. The work thus so varies that by the end of the year a student has had experience in widely differing manufacturing and testing departments. Here the student becomes a workman, getting the regular workman's point of view, and—an experience which proves especially valuable to him as a manager—has an opportunity to "make good" with many different foremen and managers. This experience in the shop is supplemented by the class training offered by the educational department. Each student reports for a three-hour recitation period each week at which time subjects such as general machine-shop practice, special processes of manufacturing, cost and pay systems, labor conditions, and methods of handling orders and materials with which he has just been dealing at first hand in the shop, are discussed systematically. In addition, all students are expected to take advantage of the lectures offered by the study clubs, which are delivered in the evenings at the Westinghouse Club. This general course of one year in length is followed by specialized training, the student as a result of his experience in the different departments and conferences with the instructors of the educational department being assigned to that branch of the company's business in which it appears he will be most effective. Advanced class training is provided during the continuance of this specialized training.

The students are paid 20 cents per hour during the first 1,370 hours, 22 per hour for the next 1,370 hours, and 24 cents per hour for any further time spent upon the general course. During the time of the specialized course they are on the pay-roll as regular employees. The company reserves the right to discharge a student at any time, or a student may leave in good standing at any time by giving a notice of one week.

The course as conducted has demonstrated its ability to train men for executive positions with the Westinghouse interests, it being estimated that over one-half of the company's leading officials were once students in this course of training for technical graduates.

to a considerable degree an experienced business man. It may be urged that a man cannot do justice to his position while engaged in study outside, yet it must not be overlooked that the two interests in this case are not so much antagonistic as supplementary. The statistics heretofore given as to earnings and salary increases of men who were at the same time studying do not indicate that their employers found them neglectful of their duties.

While this plan is here mentioned in connection with the placing of college graduates, it is in reality a method of training in itself which has much to commend it as a developer of executives whether they be college trained or not. The executive in comparison with the average employee must be broadly trained, and if, as is usually the case, his particular position will not thus qualify him it may very possibly be that certain transferring of him accomplishes the end sought.[1] This is one explanation, at least,

[1] The way this method is applied by the Goodyear Tire and Rubber Company is as follows, the author being indebted to the firm's librarian, Mr. P. H. Tarr, for the information: "From the standpoint of production the main objective has been to educate a considerable number of operatives on all our manifold processes so that they will not only be able to perform each more intelligently but in order that, through the shifting of these from one department to another, excessive absence, or shortage of labor, in a department may be offset and the balance of production maintained. To this end the Goodyear Factory School has offered courses in rubber manufacturing practice to the production "Flying Squadron" which is an organization of picked workmen from the various rubber manufacturing departments. The course is of three years' duration, leading to the degree of Master Rubber Worker, and consists of two lectures a week for twenty-six weeks annually, beginning with a study of the power plant, followed by a study of the raw materials and methods of preparation, and thence leading through detailed descriptions of all the operations which create the finished product. These men are also trained in English and arithmetic. The idea of such a course is to supplement and round out the experience gained by these men in the various departments; it gives them a rational, not a blind, conception of particular tasks, and in consequence vastly increases their general availability around the plant.

"Results obtained by the Goodyear Factory School in this direction have been very gratifying. Squadron No. 1 (so called) was organized May 1st, 1913, was graduated last spring, and about 65 per cent of these graduates have been promoted through real capacity and merit to foremen or assistant-foremanships. Other Squadrons or classes to the number of six have been

of the fact that planning clerks, methods men, and others whose duties bring them into contact with various phases of the company's business, to a relatively high degree develop into executives.

A method of training whose advance during the past few years has been even more rapid than that of university schools of commerce is the correspondence school. Classified according to the character of ownership and control, these schools fall into three groups:[1]

Public correspondence schools—those connected with certain state universities, such as Wisconsin.

Private—a class represented by such schools as the International Correspondence Schools.

Quasi-public—such as the National Commercial Gas Association and the American Institute of Banking.

So far as the training of executives is concerned, some of the correspondence schools merit scant consideration since their courses are devoted to technical subjects. The schools which offer general commercial training are relatively few in number, the leading representatives being: The Alexander Hamilton Institute, The Business Training Corporation, the Industrial Extension Institute, the La Salle Extension University, and the American School of Correspondence. Even in the case of these five institutions, the courses exhibit this marked distinction: Instruction which covers the entire field of business systematically but in a general way, the aim being primarily the development of a well-rounded business man; and instruction which deals intensively with one

organized at intervals so that the plant now has at least 300 thoroughly trained rubber workers of immense value to the production departments of the factory. Since Squadron men, in a majority of instances, have had only a limited amount of previous education, they are very eager and make every minute of the school time count."

[1] Galloway, "Correspondence School Instruction by Non-Academic Institutions," *Annals of the American Academy of Social and Political Science*, September 1916, p. 4.

phase of business, such as accounting, traffic, business English, business administration, and foreign trade, the purpose being primarily the development of an effective business specialist. In a rough way what we have here is a distinction between the general culture college and the professional school, the difference being that with these correspondence schools business in both cases is the subject of study.

Outside of the above difference the instruction, however variable in quality, follows more or less standardized lines. There are texts or lessons; lectures dealing with special phases of the subject; lesson assignments; problems; and service, the activities of the latter being the criticism of the student's problem solutions, the answering of his various questions, and, in general, the maintaining of his interest throughout the course. A fairly accurate index of the efficacy of the instruction which results is the number of students enrolled. Of the above schools, one in its four main courses—accounting, law, traffic management and business administration—has already enrolled 90,000 students, another offering a general course for executives has put 40,000 enrollments upon its books during the past five years.[1]

What is not so readily appreciated at present, however, is the facility with which instruction by correspondence can be utilized by practically every large corporation, particularly those who have numerous branches widely separated in distance. The corporation can prepare its own courses, which will enable its executives to pass along effectively the best practice as such is developed.

The correspondence school in its emphasis upon the intensive utilization of time, well expressed in its slogan

[1] Galloway, *ibid.*, p. 1.

"learn while you earn," has no doubt had a strong influence in stimulating among executives and would-be executives the use of the last method here to be discussed, viz., the reading of books and trade papers. We need not discourse upon the value in general of serious reading since this theme has received from others, in some measure at least, the laudation it well merits.[1] What may be emphasized, however, is that no other method possesses more flexibility in individual cases for the rounding out of certain deficiencies revealed, for instance, in comparing a person's present qualifications with the desired qualifications of the executive as shown in the list of fourteen qualities rated by business men, or, to put the matter positively, for the development of a man's capacity in certain desired directions.

In the more limited field of business itself—to distinguish it from the general field covered by literature although at the same time granting the distinct value to the executive inherent in works such as, to mention only a very few of the many which merit inclusion, the Bible, Shakespeare's Plays, Franklin's Autobiography, Emerson's Essays, James' Talks to Teachers on Psychology and to Students on Some of Life's Ideals, Marden's Pushing to the Front, and White's History of the Warfare of Science with Theology—a rapidly developing body of material is appearing in the form of books and trade papers. It is reported to have been the prediction of the late Frederick W. Taylor that the next generation will see the publication of 50,000 books on business, and the indications drawn from a study of the past decade are that this prediction will be fulfilled.[2] Whereas a score of years since but few books treating business in a

[1] *Cf.* John Ruskin, *Sesame and Lillies* (New York: T. Y. Crowell and Co., 1896), and Vanderlip, *Business and Education*, pp. 82–93.

[2] *Cf.* Lynd, "Increasing Interest in Sound Business Information," *Printers' Ink*, July 26, 1917.

serious way were to be had, the supply available to-day has already reached goodly proportions. (See Table XVII.)

TABLE XVII

BUSINESS BOOKS AVAILABLE

Year	*No. pub.*	*Total*	*Year*	*No. pub.*	*Total*
1867	1	1	1893	2	15
1868	0	1	1894	3	18
1869	0	1	1895	3	21
1870	0	1	1896	4	25
1871	0	1	1897	3	28
1872	0	1	1898	4	32
1873	0	1	1899	2	34
1874	1	2	1900	13	47
1875	0	2	1901	13	60
1876	0	2	1902	13	73
1877	0	2	1903	20	93
1878	0	2	1904	31	124
1879	0	2	1905	32	156
1880	1	3	1906	34	190
1881	2	5	1907	56	246
1882	0	5	1908	65	311
1883	0	5	1909	89	400
1884	0	5	1910	116	516
1885	1	6	1911	158	674
1886	0	6	1912	123	797
1887	0	6	1913	153	950
1888	1	7	1914	198	1148
1889	0	7	1915	181	1329
1890	1	8	1916	135	1464
1891	4	12	1917	18 *	1482
1892	1	13			

* This table was compiled from S. B. Ball, *1600 Business Books* (second edition, revised and enlarged to 2,100 titles: White Plains, H. K. Wilson Co., 1917) and the apparently poor showing of 1917 is due to the book's date of publication having been May.

The publication of business books has now assumed a sufficient importance in the estimation of several well-known publishers to justify the addition to their respective organizations of departments especially devoted to such activities, and certain other publishers devote their entire attention to this field.

In the narrower sense of management as distinct from

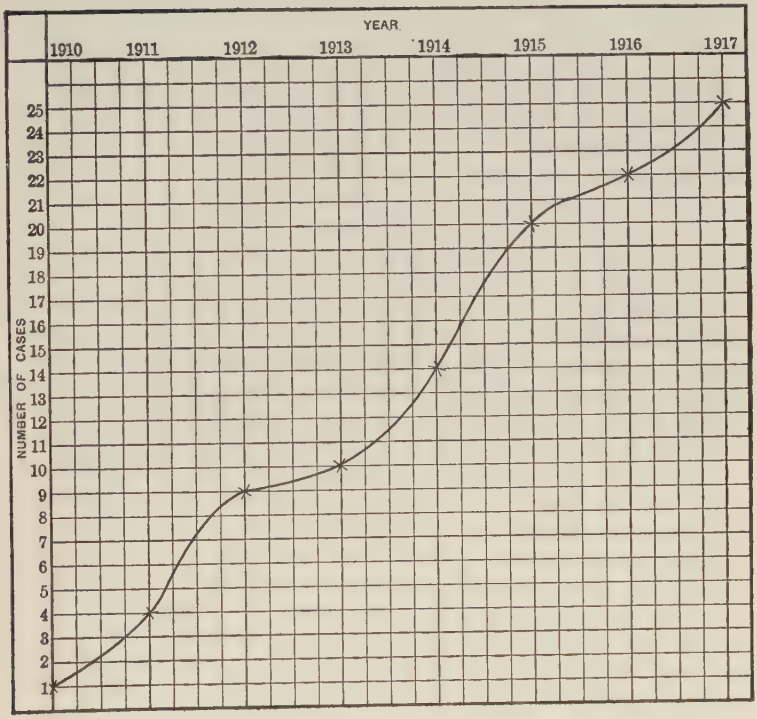


FIG. 14.—Development of Books on Business Management.

In the preparation of this graph a considerable list of books dealing with business management was submitted to Professor Edward D. Jones of the University of Michigan with the request that he prepare a list of the twenty-five best works.[1] Following this, the dates of publication were found, which dates presented graphically indicates not only the recency with which these books have been made available but also the promising nature of the prospects for an increased availability of books dealing with business administration.

subjects such as business finance, accounting, or advertising, the development of a business literature has made similar progress. There are more books and better books dealing with the science and technique of management now

[1] The twenty-five books selected by Professor Jones as the best are as

than ever before, with the indications all in favor of a continued development. (See Figure 14.)

The situation with respect to trade journals is much the same. A beginning was made in 1888 with the publication of what has since been developed into the leading journal for advertising managers and sales managers. In the early nineties the technical magazines commenced to print occasional articles on such phases of management as the location of a shop and the labor policies of mills and factories; last year one of these magazines changed its name in order that this might accord more closely with the new policy of the publisher, viz., to serve not technical men primarily but industrial managers. Two magazines now well recognized as leading in the class of business publications were started in 1900 and 1907 respectively. What appears more significant than the mere increase in numbers is the decided improvement in the contents of these and other business journals.[1]

Although the foregoing seems to render clear the belief that in so far as the availability of business literature is concerned more than an auspicious start has been made, the mere publication of such books and trade papers, due to the fact that the respective publishers are business men intent on maintaining a profitable business, to a fairly definite extent insures their perusal. However, the amount of serious reading done by a group of executives does not depend alone upon the efforts of publishers but in part as well upon the corporation's own activities. In consequence,

follows, the name of the author only being given on account of space limitations:

Annals (May, 1916), Brinton, Drury, Emerson, Gantt, Gilbreth, Going, Goldmark, Gowin, Hartness, Hearings on Taylor and other systems of shop management, Hoxie, Jones, Kimball, Knoeppel, Leffingwell, Nat'l Civic Fed. Rept. on Profit Sharing, Price, Library of Factory Managment, Taylor (2), Thompson (2), Schulze, Tuck Conference.

[1] *Cf.*, the unusually complete and accurate list of business journals in *Ayre's Newspaper Directory*, the latest edition.

a great many companies now make some provision for their executives' reading by furnishing them certain books and trade papers, while a number have attacked the matter systematically through the installation of a library, presided over by a trained librarian, its use encouraged by more or less continuous appeals.[1]

[1] The activities of the National Cash Register Company's library, as explained to the author by the firm's librarian, Miss Phail, are in the main as follows:

Ordering books, magazines, reports and special articles deemed of interest to the company.

Submitting lists of suggested readings on special subjects, such as advertising, retail business, reference work, and production methods.

Preparing reference lists upon any special subject. The various foremen and other officials called upon recently to address groups of employees during the noon hour made requests for such reference lists almost invariably.

Analyzing the contents of books and magazines in the search for special articles to which the attention of certain members of the force should be called.

Writing brief articles on subjects deemed of interest. The "N. C. R. Power Plant," to mention this four-paged mimeographed pamphlet as an illustration, states succinctly the requirements necessary for becoming a professional engineer in the company's plant, follows this with several suggestions both practical and inspiritional on self-advancement and concludes with a list of books treating this subject which may be borrowed from the library.

Making graphic charts of certain statistics, from sources such as the United States Census Bureau or the company's accounting department, which it is believed deserve a display for the time being upon bulletin boards in the library windows.

Clipping extensively from current newspapers and periodicals.

Classifying and indexing the library's various materials so that they may be rendered readily accessible.

The company's house organ for employees is useful in extending the use of the library's facilities, as is true, of course, of other phases of the company's educational work.

In its monthly issue, *Grits and Grinds*, the house organ of the Norton Company, gives titles, references, and abstracts of the important current articles pertaining to grinding; and the *Fore River Log*, the house organ of the Fore River Shipbuilding Corporation, presents the titles of several recently published books on marine engineering and allied subjects, the list being followed by a form to be filled out and mailed to the company library by persons interested in borrowing any of the volumes.

The use of public libraries by business men is discussed by Miss Adelaide R. Hasse, of the New York Public Library, in *American Industries*, January, 1917; *The Library Journal*, April 1917, and October 1917; and *The General Federation Magazine*, April 1918.

CHAPTER X

The Training Program

In the two preceding chapters we have considered the efficacy of training as a means for developing executives and, in case this idea of training be adopted, several of the chief methods by which it is to be put into operation. Before proceeding further it seems desirable to have before us the situation as it exists to-day among our leading corporations. When the status of the training of executives has thus been indicated we may conclude the discussion of training with certain criticisms of the practices which now prevail and indicate some of the changes which might profitably be instituted.

A number of corporations have submitted data, the information coming in the main from educational directors although higher officials frequently have been responsible for the statement of their firms' policies. Part of the data were secured by personal interview in calls made by the author upon local firms and during a fairly extensive trip through the Middle West undertaken by him; part were secured by questionnaires sent those companies upon whom it had not been found convenient to call yet whose policies were deemed representative of the most advanced practice. In all, data are included from forty-four corporations.[1] Information such as this does not lend itself readily to statistical presentation, due in part to the means employed in its

[1] On account of space limitations it does not appear feasible to list the names of all these companies. However, they comprise the leading establishments of the country—four department stores, one mail order house, two public utilities, and thirty-seven industrials.

collection but as well to the nature of the problems involved. The latter fact will be commented upon later.[1] It has accordingly been considered desirable to cite in brief quotations the views of various corporation officials,[2] since these excerpts will serve to supplement the statistical tables and thus better achieve the purpose intended, that of setting forth the present status of the training of executives.

TABLE XVIII

ASSISTANTSHIPS

Method used	*Number*
Yes	24
No	0
No information obtained	20

"We do naturally make use of this method although no systematic effort, we believe, is made this way, the training being largely by force of example and practical experience in daily work."

"Every man of importance to the institution should have an understudy."

"Assistants to department heads are of course expected to be in line for promotion and unless something develops during their tenure of office it is reasonable to expect that they will secure that promotion whenever it is due."

"We do have assistants to department heads but only in a few instances is the assistant able to assume the larger duties."

"Assistantships are not very satisfactory as a method of training because eighty per cent of the assistants are really

[1] *Cf.* p. 171–172.

[2] The names of the gentlemen responsible for these various statements are not being given (although it would add considerably to the value of the statements were this possible) since the information was secured under conditions which render it more or less confidential. The sources of this information in general have already been indicated.

assistants, that is, they are only assistants and have not the capacity to advance to take charge of departments. About twenty per cent of the assistants may be developed into department heads. These two figures are not especially drawn from the experience of our company."

TABLE XIX

Systematic Rotation of Positions

Method used	*Number*
Yes	8
No	15
No information	21

"While our executives before promotion often have held positions in different departments, this is with us entirely a matter of chance or the exigencies of the organization. We have no plan of systematic rotation such as you contemplate."

"Our college plan provides for the employing of university graduates upon a strictly educational basis. The

TABLE XX

Conferences

Method used	*Number*
Departmental	
Yes	26
No	1
No information	17
Interdepartmental	
Yes	23
No	1
No information	20

course is about six months in length. The men work a specified time in the various departments in order to secure a knowledge of this business. If they are of the proper

caliber they are promoted at the end of their training period to executive work. If they are unsuited for executive work they are not retained in the business."

"We do not assign to various positions for brief periods unless a man is soon to take a position which requires special training in certain lines."

"Our conferences are over actual work and not with a view to developing executives."

"While we do hold both departmental and interdepartmental conferences they are not a regular thing but subject to special call."

"Conferences are good for securing team work but not for developing executives."

TABLE XXI

CLUBS AND OTHER STUDY ASSOCIATIONS

Method used	*Number*
Within organization	
Yes	15
No	3
No information	26
Outside organization	
Yes	22
No	3
No information	19

"We have in our plant two Alexander Hamilton Clubs and a Technical Society which promotes a number of popular lectures per year on certain technical matters."

"When our societies were first organized throughout the territory it was thought that educational and recreational activities could be intermixed on the basis of fifty-fifty, but experience has shown that if the interest is to be maintained in society work the majority of its major activities will have to follow recreational lines, so the plan has been

changed to handle educational work as a supplemental feature rather than as one of the main features of regular society meetings."

"It is our policy to be represented at conferences and conventions where matters of particular or allied interests are to be discussed. Such persons as are delegated to attend are required to write reports and these are routed through the organization to persons interested."

"We have entered quite a few of our executives and salesmen in an organization called the Salesmanship Club. Have also had quite a number of our people join the Philadelphia Chamber of Commerce. Once a month we send from six to eight of our factory executives to attend an informal dinner and after dinner talks of an association known as the Philadelphia Society for the Discussion of Employment Problems. Once a year about fifteen of our office people attend a dinner of the Hardware Merchants and Manufacturers Association, of Philadelphia, at which time there are in attendance some very prominent and instructive speakers. We are always very liberal in permitting our representatives to attend different trade conventions."

"We are members of almost every organization that we can expect to derive any profit from along these lines and usually see that we are represented at their meetings by the people who can get the most good and bring it to us. For example, the Employment Managers Association of Boston is usually attended by anywhere from two to six of our people; the local Advertising Club is usually attended by four or five, and at such meetings as those of the Metal Trade Association, the Machine Tool Club, National Association of Manufacturers, Chamber of Commerce of the United States, etc., we usually have one or two present."

"We have a small office library containing a few technical

TABLE XXII

BOOKS AND TRADE PAPERS

Method used	*Number*
Yes	25
No	0
No information	19

books on subjects in our line and also a few inspirational books."

"We circulate over 3,000 books and trade papers a year. We have a branch of the Public Library located in our plant. We also maintain a private library with books especially selected on the lines of efficiency and scientific management."

"Any person reading a book twice, and writing a short essay showing a comprehensive knowledge of it, can secure this book at the expense of the company."

"We keep the book cases here near the door so that all persons entering the educational department necessarily pass near them. This, plus the pushing the instructors do, seems to be developing quite a little serious reading."

"We supply technical journals to the reading rooms of the various factories."

"We have a well-equipped business library and all the technical and business magazines."

"We maintain a library which has all of the current trade literature and everything which is published which seems to bear at all directly on the work which we are trying to do."

"Up to the present time the training of our executives has not been directly under the supervision of the school. Our general manager has done the most of the work himself. We have, however, established our Commercial Efficiency Course largely for the purpose of training executives, for

TABLE XXIII

THE CORPORATION SCHOOL

Question	*Number*
Is it possible to offer any formal training for executives in your school?	
Yes	13
No	10
No information	21
Does your firm coöperate in any way with correspondence schools?	
Yes	6
No	17
No information	21
Do you cultivate relations with university schools or commerce and technical schools?	
Yes	12
No	12
No information	20

we recognize that the executive of the future must be a broadly trained man, the product of either our own school or of some other institution and one who is able to pass certain tests before appointment."

"An experiment is now going on in our firm which is being watched with considerable interest. The president now well along in years has decided apparently that the very best way of perpetuating his ideas and policies is to train the junior officers. So for the past year he has been meeting them regularly each week, for lectures and discussions. The young men say it is a great course, but I don't know much about what goes on since none of us higher officers are allowed to be present. I judge though that it consists of management, merchandising, and a liberal admixture of business ethics."

"Having the training work going on makes it possible for us at times to accept material which seems to be pretty raw which under other conditions we might not be able to use and develop at all. Our business, however, is such that it is

really necessary for us to do this work as we cannot expect any school, nor any of our competitors for that matter, to train people for us as we would like to have them trained."

"We coöperate with the university through its extension courses." (The reply of four companies.)

"We work cordially with the Municipal University in a special coöperative course for engineers, and in the evening courses."

"The performance of men turned out from these courses [nine months' course for college graduates in which various positions are assigned systematically] during the past four or five years has been so satisfactory that this year we have thirty-five such men in training."

TABLE XXIV

COST OF TRAINING

Method used	*Number*
Money directly expended for training by company	14
No money directly expended by company	7
No information	23

"The company repays the tuition to those who finish a course and get a certificate."

"We reimburse any of our employees with one-half the cost of tuition when they have completed any course in the Scranton Correspondence School."

"In some cases we pay tuitions on completion of study courses—not in correspondence schools but in the local Mechanics' Institute and in the high schools of the city. We pay the membership dues of those whom we pick in our organization to become members of the local Chamber of Commerce, and sometimes pay the expenses of executives who attend the conventions of business and educational associations in various parts of the country."

"The company maintains memberships for individuals in a number of outside associations."

"Five hundred dollars is our cost for the nine months course for college graduates." (These men receive a salary of sixty dollars per month.)

"The matter of costs is rather an intangible question. I am not prepared to give you the figures along this line except to say that we are going to considerable lengths in the training and education of the executive for his position."

"The cost of training these executives can not be determined since this process is going on continuously. Each official must take an active part in the training of a competent successor."

"We have no data as to the costs of training men according to these plans, nor do we know whether it is cheaper than the establishment of a regular training course; but we have always felt justified in the expenditure involved in view of the security of fortifying ourselves against possible vacancies in advanced positions."

"We have found it possible to secure all necessary funds for the training of anyone to whom it seemed wise to give it."

"We feel justified in going to some cost in the training, if a satisfactory way be found."

"No cost is too high if it brings results in the right training of future executives. The question remains, however, of the effectiveness of the various methods proposed."

"The Educational Department has a very great influence in the selection of men for executive positions and is frequently asked to select executives as well as give opinions regarding them. . . . On all men in direct training for executive positions, we have a card index which is a complete record of the training and progress made."

"We depend more upon personal impressions than we do on examinations or any artificial checks."

TABLE XXV

INFLUENCE OF EDUCATIONAL DEPARTMENT UPON THE SELECTION OF EXECUTIVES

Degree of Influence	*Number*
Recommended by supervisor	2
Supervisor consulted at time of selection	2
Slight	1
None	17
No information	22

"We do not have many checks upon the ability or progress of the men being trained for executive positions. But we expect to see an improvement in work."

"We have no definite records to show results."

"There are no regular checks or records."

"We have a personal record blank in which a man's record is entered every six months, or oftener in case some special occurrence or request is made. These records may be seen by an employee at any time if he calls to see me, but not otherwise, because I wish to talk over with him his record. In recommending our men for promotion, personal record counts a possible twenty points, school record fifteen points, attendance record twenty-five points, although if this latter is very bad it may go to as low as a minus twenty-five which will deduct from the plus points on the other records. The manager's estimate of the personal value of an employee in his position and of his potential value counts thirty-five points. Those receiving less than sixty per cent are placed upon a special list and improvement must be had or they are discharged. Upon solicitation the manager may remove from this list any name of his department, but should this name appear a second time the manager's authority cannot be exercised and the person is discharged; that is, if his credits total sixty per cent or lower he is a marked man to whom a further chance is given at the request of his manager, but only one more chance."

"While we have practically nothing to say concerning the selection of executives in general we do exert a major influence in the case of those men who have completed our course for college graduates. This is due in the main to our complete knowledge of the man. We engaged him originally at his university, have held both personal and committee conferences with him where his characteristics and aims were pretty fully entered into, and his complete record, based upon the reports of instructors and shop foremen, is filed in our office. In addition to the general comments made by his instructors and foremen, this record calls for the ratings of 'very good,' 'average,' and 'unsatisfactory,' upon these personal characteristics:

Physique	Tact	Thoroughness
Personality	Initiation	System
Knowledge	Attitude	Analysis
Common Sense	Originality	Decision
Reliability	Industry	English
Open mindedness	Enthusiasm	Ability

We may say that as the number of such graduates increases our influence upon the selection of executives similarly will expand, it being assumed, of course, that we shall be able to make good in this, something which we have been able to do in the past."

"For our work we regard it more important to train the rank and file than to train men for executive positions. These positions usually take care of themselves, if the personnel is right. The man is always coming along who is able to take larger responsibilities."

"We have always relied upon the executive to surround himself with capable subordinates, and have expected these to prepare themselves for advancement."

"We do not maintain any clubs, associations, or schools for this purpose, feeling that the best training an employee can get is in his everyday contact with the business, where,

TABLE XXVI

EXECUTIVE VERSUS RANK AND FILE TRAINING AS AN ACTIVITY OF THE EDUCATIONAL DEPARTMENT

Question	*Number*
What proportion of your effort is given to the rank and file, as compared to training men for executive positions?	
Entirely to rank and file	26
Practically all to rank and file	3
Approximately the same to each	2
More than 50% to executives	0
No information	13
Of what relative importance to your firm do you regard these two lines of training activity?	
Rank and file more important	5
Executive more important	2
Approximately equal in importance	1
Cannot state	3
No information	33

of course, he has ample opportunity to become familiar with the problems which confront his superiors."

"We have no basis on which to divide the expense or the time given to either one or the other. We regard either as important at all times and do whatever seems to be possible along either line so long as it seems to be profitable."

"The relative importance of the two is about the same. If there were any difference it would be in favor of the executive training, for with executives properly trained the problems of training men for the ranks is greatly simplified."

"Education is for the executive as for the workman and should be as definite and specialized. But the executive as a stronger individual requires closer individual study."

"It seems to us that the training of executives, department heads, and so on, is of greater importance than the training of men for the ranks, because with a staff properly trained with a view to the spirit of the organization more can be accomplished than with a trained rank and file and a disorganized staff. This refers, however, to specific training and not to the training which gives spirit and unity

to an organization in which case we presume it is about equally important to extend the training of both classes of an organization."

"We have no definite plan of operation and, much to our regret, what we do is somewhat on the 'hit and miss' plan."

"We do not have any systematic plans for training executives. We feel that there is opportunity for progress along the line of training executives in our office although we realize we have made practically no contributions to this subject."

"We have no systematic method." (A reply practically duplicated by five others.)

"Our company has not as yet taken any active steps toward the special training of its executives. I am pleased to say, however, that we contemplate some time in the near future a course for our operating foremen and when this is started we are going to make a strong feature of the question of management of men."

The foregoing tables and comments as a symposium of the views held by officials of the more advanced corporations present excellently the status of the problem of training executives. We need not review in detail the various points, both positive and negative, which have been so well presented, but may confine ourselves to certain more or less general conclusions.

A matter of considerable interest is the very small influence now being exercised upon the careers of executives by the directors of the respective corporation schools. So slight is this influence that it practically amounts to the policy of non-intervention on the part of the director in the selection, the advancement, the transfer, or the discharge of the company's officials. Yet this director is a specialist in matters of personnel.

This appears due not to a lack of faith in the director's ability but to the fact that very little training of executives is being attempted by this official, his time being pretty completely engrossed, upon the whole, with caring for the rank and file. Moreover, owing to the recency of the inauguration of this educational work with the rank and file not a great number of men whose activities have come under the direction of the educational departments have had time as yet to attain executive positions. When this occurs it will be a matter of concern to investigate the records made as students by men being considered for promotion.

This assumes, however, that the records of the educational department are kept, and that the manner both of their origin and recording is such as to render them of value as comparable data. At the present time, needless to say, practically no data concerning the capacity shown during his period of training by any candidate under consideration for an executive position is to be had. It may be mentioned that the three cases, so far as was determined, in which the educational directors were found exerting the most influence upon the careers of their firm's executives were in connection with departments where adequate records were available. In short, these respective directors possessed information well worth consideration; and it is to be safely assumed that other directors to a considerable number will attain to the same positive situation.

In the consideration by corporation officials of this problem of training executives one is impressed upon the whole with the recency of its conception. The minds of many have not yet grasped the policy *per se*, to say nothing of its significance; and the replies were in consequence often vague. It was not so unusual, to mention an example of this general tendency, for an officer upon being questioned concerning the training of executives to discuss in detail

the firm's apprenticeship plan or the course for its traveling salesmen. One official stated that the only training afforded the executives of his firm was through their outside affiliations, specifying certain technical societies; although he also had pointed out the assistantships, libraries and trade papers; and conferences both departmental and interdepartmental were being employed with good effect. He had not at first thought of these as possible agencies for training. This newness of the problem and its haziness in the minds of many officials, rather than any unwillingness to share information, accounts in large measure for the number of cases of "no information" shown in the preceding tables.

The foregoing, however, by no means justifies any attitude of captiousness, a view which is apt to distort the conclusions of anyone who investigates superficially but at first hand the problems of business men. These officials may be somewhat deficient in matters of pedagogy and adverse to working over far-reaching but as yet to them untested plans; they do possess an abundance of common sense and the ability to hew their way forward with few costly errors and much practical result. A careful consideration of their ideas as above presented—interpreted in the light of the fact that the officers responsible for these views are connected with corporations operating under a considerable variety of conditions—it seems, will serve to emphasize the essential soundness of their procedure with respect to the training of executives. They have adopted the methods which, upon the whole, afford the most in the way of positive results according to the expenditure made, and they exhibit more than a fair interest in determining the feasibility of such newer measures as are commended to them. In fact, it appears evident that considerable well-tested progress has already been made in the training of executives, and that with the expected development of additional

training methods in the precision of their operation a program highly effective for the training of executives will be in due time evolved.

It is in the lack of such a program that the present methods of training are most defective. For the program represents organized effort, in contrast to the hit-and-miss attempts which characterize the training often, it may be no overstatement to say, commonly, undertaken. The development of a program involves a rating of the various methods available for use on the basis of the corporation's particular needs and the relative effectiveness with which each method is able to meet such needs. Several officials, as may be noted in the foregoing comments, mentioned as an item of considerable importance that as yet they were lacking organized plans, thus implying rightly their recognition of the importance of organized effort in solving any problem of moment.

The preparation of a program adequate for the purpose desired appears to be a task requiring a specialist, a well-equipped educational director, who will, of course, cooperate with the other officials of the corporation in evolving a comprehensive scheme of training in which provision for the training of executives is regarded very properly as the capstone of the company's educational activities. The scheme of training as thus enlarged and coördinated will demand for its proper execution an educational director evincing more capacity perhaps than now being shown by the average incumbent, but it is believed that a considerable number of directors already possess the required capacity and are interested to push their efforts higher. Moreover, the program of training here implied does not call for the educational director to teach as a class the leading executives of his company—which would perhaps prove unworkable in practice—but to organize such a program that all persons within the corporation are provided opportu-

nities for increasing their effectiveness, and to supervise the operation of such program.

It may seem at first thought that in training executives the preparation of the teaching material itself forms a serious, if not insuperable, obstacle. The rank and file can be drilled in the methods prescribed as standards by higher officers, such standardized methods providing excellent teaching material; but how prepare standardized material for those men who themselves are at the forefront dealing with unusual problems and passing it along, properly systematized, to subordinates? Here we reach evidently the limits to effective training; its real content consists of general principles and in the case of executives these principles are in process rather then fully formulated. The difficulty is not so serious, however, as it may seem. There obtains in every large organization a considerable body of information which, when organized, provides material adequate for the preliminary training, at least, of its executives. This information in certain lines of business or in certain departments of an organization has already reached a stage of definiteness adequate to satisfy the demands of effective training, and, as has been pointed out in a preceding chapter, since the process of developing a science of business is under way satisfactorily it is only a question of time until such definiteness of data obtains in practically all departments and lines of business.

Moreover, the more advanced training of an executive need not be delayed because the material so far organized has been imbibed by some junior officer anxious to study further. He is, or at least should be so far as his department is concerned at any rate, in position to attack directly his firm's unsolved problems, and in the process of their solution and the systematization desired for the rank and file secure his further training. The training process itself is not a mere taking in of material predigested, but at best always

requires activity on the learner's part; he must acquire details, weave these into generalizations, and in turn apply these general principles to new concretes. Under conditions of well-organized materials and expert direction, these steps in the training process can be very considerably accelerated, yet the lack of these two need not require the cessation of training. What this lack does indicate, is that the executive under training conditions such as these is thrown more largely upon his own resources, and that from the various forms of training available such selection and adaptation is to be made as will best meet the needs. This means no more than what was stated above, that the training program should in each case be adapted to the conditions of the particular corporation in question.

The relation between training and selection may be pointed out in conclusion. It possibly appears that the institution of a training program adequate for its purpose reduces considerably the importance of selection, since, owing to its influence, applicants otherwise unpromising are to be developed later into persons of some capacity. Doubtless within every large organization persons can be pointed out who years since as applicants came perilously near rejection on account of certain inferior qualifications but who, because of incessant application, have not merely remedied their early deficiencies but have attained high official positions. The problem which we have here again is nature and nurture, and the answer must be the same as before: Nurture merely develops the qualities of capacity inherent in the individual, and while ordinary natural qualities fully developed may surpass excellent natural qualities undeveloped it does not follow that the corporation should give no heed to those inherent capacities of its candidates simply because it has a highly efficient training scheme. The more painstaking the training methods the more desirable is native capacity at the beginning.

The training program in itself, furthermore, has an interesting bearing upon the problem of selection, as certain data recently compiled by the author indicates. The School of Commerce, Accounts and Finance of New York University, through its bureau maintained for the purpose of bringing its alumni and students into touch with business firms desiring men trained in the science and art of business, secured from the alumni in 1916 the statements concerning annual earnings from which the graph shown on page 128 was prepared. The author then secured from the Recorder's Office the average grades secured by the respective students whose annual earnings had been submitted, the study including all the men in five different classes whose records of earnings were available. This average grade, it may be added, was the final average of all courses taken during the student's three years attendance. This school, furthermore, lays no particular stress upon high grades as such, the aim being rather the cultivation of business ability in the tenure of positions outside.

In each class, the students were divided into four groups on the basis of their average grades, the groups being termed quartiles. The first quartile in each case contains that fourth of the men whose grades were highest. The second, third and fourth quartiles represent groups of decreasing academic proficiency, according to the grades. Should the annual earnings be the same for all four quartiles, the indication would be that no relation exists between the grades secured in school and the salaries secured after graduation. The results are as follows. (See Table XXVII.)

It appears in general, although with respect to certain groups the indications are to the contrary, that the average earnings vary in the same way the grades do. Taking as a basis of comparison the $2,453 earnings of the first quartile men, the earnings of those whose grades were lower equaled ninety per cent, eighty-one per cent, and eighty-nine per

TABLE XXVII

NEW YORK UNIVERSITY SCHOOL OF COMMERCE, ACCOUNTS AND FINANCE
GRADES AND ANNUAL EARNINGS

Class and Year	*Cases*	*Average Salaries of the*			
		1st Quartile	*2nd Quartile*	*3rd Quartile*	*4th Quartile*
Class of 1909 (5 yrs. after graduation)	8	$1940	$1650	$2100	$3320[1]
Class of 1910 (5 yrs. after graduation)	12	4500	3086	3666	2040
Class of 1911 (5 yrs. after graduation)	20	2312	2524	1912	3128
Class of 1912 (3 yrs. after graduation)	20	1880	2140	1520	1600
Class of 1913 (3 yrs. after graduation)	32	2258	1852	1669	1740
Averages.....		$2453	$2204	$1987	$2168
Percentages...,		100%	90%	81%	89%

cent respectively. This means a difference of over two hundred forty-five dollars a year in each case.

These results confirm the findings of Dr. D. E. Rice in his study of the graduates of Pratt Institute.[2] The salary reports of these men were secured in 1913, four to six years after graduation; and when compiled were as follows. (See Table XXVIII.)

In the data secured from its alumni by the School of Commerce, Accounts and Finance the earnings were shown from the first year the respective students entered upon

[1] It is to be noted that this group is composed of only two cases. A salary of $4,000 was reported by one of these men. In the compilation of these statistics it was observed that in several cases the student receiving high marks entered the teaching profession; although no record was made of these cases it is believed that the inclusion of only those entering business would render the results somewhat more favorable with respect to the high mark men than Table XXVII now indicates.

[2] *Cf.* Hollingworth, *Vocational Psychology*, p. 198.

TABLE XXVIII

PRATT INSTITUTE GRADES AND ANNUAL EARNINGS

Class and Year	*Cases*	*Average Salaries of the 1st Quartile*	*2nd Quartile*	*3rd Quartile*	*4th Quartile*
Mechanical '07.....	35	$1,800	$1,675	$1,362	$1,387
Mechanical '08.....	41	1,450	1,512	1,512	1,275
Mechanical '09.....	39	1,375	1,262	1,313	1,137
Electrical '07.....	26	1,750	1,675	1,675	1,412
Electrical '08.....	36	2,147	1,437	1,262	1,262
Electrical '09.....	41	1,462	1,212	1,387	1,200
Averages.....		$1,664	$1,462	$1,418	$1,279
Percentages.....		100%	87%	85%	76%

their courses. Accordingly, it seemed worth while to note whether the students making better scholastic records had advanced more rapidly or less rapidly in their business earnings than those whose scholastic records were lower. The earnings of all the men in the first quartile group were averaged year by year during the three years these men were in the School of Commerce, Accounts and Finance and the three years following graduation. Similarly the grades of those ranking second, third and fourth with respect to grades were averaged. The final results are shown in Table XXIX. It appears that instead of neglecting their business in order to secure higher scholastic grades or *vice versa*, the first quartile men secured both higher salaries and higher grades. Their advancement was also more rapid from year to year.

These studies are practically the only evidence available as yet upon the relation between the scholastic record and earnings in the business career, but they are confirmed in the main by investigations made of several more or less closely allied groups of students.[1] While it does not seem

[1] *Cf.* the excellent summary by Professor Hollingworth in his *Vocational Psychology*, Chap. VIII.

TABLE XXIX

INCREASES IN SALARY AS RELATED TO GRADES RECEIVED IN NEW YORK UNIVERSITY SCHOOL OF COMMERCE, ACCOUNTS AND FINANCE

Quartile	Initial Salary[1]	Increase in Salary 2nd yr.	3d yr.	4th yr.	5th yr.	6th yr.	7th yr.	Total increase
First.....	$1,207	$160	$160	— 16	$588	$110	$443	$1,445
Second....	1,140	53	78	300	102	314	296	1,143
Third.....	820	430	—190	153	328	164	281	1,166
Fourth....	858	198	526	—300	198	226	357	1,205

pertinent to describe the other investigations here, the evidence drawn from these various sources apparently justifies the conclusion that, while subject to exceptions, in general a direct relation does exist between the scholastic record and ability in a business position.

The attendance at an outside educational institution, however, constitutes but one phase of the training program described in the preceding chapter. In consequence, the discussion so far of academic records indicates only meagerly the utilization for purposes of selection of the candidate's record of performance during training, since what said candidate has done as an assistant, a conferee at meetings,[2] a member of study clubs, a patronizer of the company's library, or a student in the company's own school, to

[1] The initial salary refers to the first year these men were students, and the fourth year refers to the first year after graduation, the course being three years in length. The increase in each case refers to the increase over the preceding year, with the exception of the final column which refers to the total increase in salary between the student's average earnings during his first year in the school and his fourth year after graduation.

[2] Says Samuel Miles Hastings, president of the Illinois Manufacturers' Association: "As a means for discovering the capabilities of executives, I have yet to find a method that excels the weekly office conference. I practice calling meetings of department heads once a week or oftener to discuss the current problems of the business and to invite helpful suggestions. These meetings even up the opportunities for advancement of the men who are tactful pushers and the men whose habit it is to 'saw wood and say nothing.' Something will usually come up in the meetings that will draw out the fellow who 'just saws wood' and his true worth will be emphasized." *System*, September, 1917, p. 307.

mention typical phases of the training program, can have been brought under much more intimate and long continued observation, with a consequent increase in accuracy when used as a means of selection. While as yet corporations usually lack records of performance during training, those companies whose program for the training of executives is more complete are at least proving how useful such records can be.

CHAPTER XI

Incentives for the Executive

It has been assumed in the foregoing discussion that the corporation afforded incentive sufficient to attract applicants of at least average grade, and to cause these men when once on the pay roll to be reasonably desirous of advancing themselves through the utilization of the firm's training. Were this not to be the case, no plan of selection and training, however wisely conceived, could attain the results expected of it. To the contrary, where sufficient incentive exists it has been found that even seemingly mediocre selection and training methods have sufficed for the attainment of excellent results with respect to the executive personnel. Such being the intimate connection between the two allied functions of selection and training and the incentives afforded by a corporation, it appears desirable to consider this latter factor as a necessary phase of our problem. Needless to say, the theme of incentives is so very broad that the discussion here is rather to be taken as a supplement to the preceding chapters than a consideration of the subject *per se*.

In 1912, when testifying before a congressional committee investigating the United States Steel Corporation, Andrew Carnegie thus pointed out what students of the corporation will agree in given instances may constitute a serious defect, the lack of personal incentive on the part of its officials: "I do not believe that corporations can manage a business like partners. When we were partners I felt we could run around corporations. Take thirty-five men, young men,

each one will be interested in a department and will watch the spigots from which there might be leaks. . . . The best corporations that ever were formed will be beaten by such an organization as we had in the Carnegie Steel Company. I would not say that the greater corporation would not equal the smaller corporation. What I wish to say is, that the corporation is not in it with the partners managing their own business." [1] The close application which a proprietor or a partner willingly bestows upon a business because it is his and the results which accrue are to be his, is apt to disappear, as Mr. Carnegie indicates, when his particular establishment is absorbed into a great combination and the erstwhile owner becomes merely a salaried officer. The ability to initiate projects, that deep-rooted pleasure in being a cause which supplies the motive force in so much of our endeavor, in the interests of what is felt to be the necessary degree of control in corporate affairs very commonly undergoes considerable repression. In general it can be said that the corporation faces two related dangers, a cumbersome organization and indifferent executives.[2]

[1] Cited by C. W. Gerstenburg, *Organization*, (New York: The Alexander Hamilton Institute, 1917), p. 45.

[2] The methods in vogue at the Baldwin Locomotive Works were thus described by one of the partners, Mr. Alba B. Johnson: "We are all partners on an equality, and we handle the business in each department simply on the basis of an agreement that shall be the business organization. As a firm we hold meetings (according to our co-partnership articles every week, but actually whenever we find it necessary to do so) at which all matters of establishing new works, putting up new shops, or making large expenditures for tools. We agree upon such questions in firm meetings. We also agree on large policies in regard to making sales, rearrangements of expense, etc., but each of these four partners is absolute autocrat of the branch of the business he represents, because he knows all the time what the attitude of his partners is toward these matters. He does not have to consult them to decide whether it is necessary to make a contract or not. The thousand-and-one questions which are coming up daily in the administration of the business are settled instantly by the partner to whose province they belong, and if it is necessary to consult or get the opinion of one of the other partners, it can be done in an instant. That is a great contrast to the corporate form of organization, in which the Board of Directors is supreme; in which things

It is but natural that indifference associates itself with a less keen sense of individual responsibility, although at the same time, unfortunately, the corporate form of organization is particularly subject to abuse. The stockholders as a rule are widely separated and ignorant of the details of the company's activities, and the impersonal entity of the corporation itself furnishes the clock of secrecy and freedom from individual responsibility under which exploitation may thrive. The forms which such exploitation takes are exceedingly numerous, although the most important perhaps may be thus indicted.[1]

Appointments due to influence—the same practice so far as principle is concerned which in political affairs is termed the "spoils" system.

Exorbitant salaries—a practice, somewhat related to the above, in which sums rightfully belonging to the stockholders are diverted to an inner group under the guise of salary payments.

Contracts that benefit officers—those responsible for placing contracts turn them to concerns in which they themselves are interested or from whom they receive valuable considerations in return.

Divergence of business or capital to other companies—these other companies in one form or another systematically "milk" the corporation, due to the connivance of its own officers.

Misuse of inside information—information secured solely through their official connections is here used by officials

have to be put before the Board of Directors by the President, and in which the Secretary, Treasurer, and General Manager each has his little province, and they are all apt to be more or less jealous of each other, because I do not know of any place where the jealousies are apt to be keener than they are in business corporations, where the intrigue for promotion is apt to be very great." J. Russell Smith, The *Elements of Industrial Management* (Philadelphia and London: J. B. Lippincott Co., 1915), pp. 25–26.

[1] *Cf.* W. H. Lough, *Business Finance* (New York: The Ronald Press Co., 1917), Chaps. XXIII–XXIV.

and others on the "inside" for their personal benefit, commonly in connection with stock market speculation.

Juggling accounts—inasmuch as many accounting entries are matters of judgment and good faith, the corporation's records and statements are open to manipulation, the effects of the false or misleading statements supposedly accruing to special interests.

It is true that these and similar forms of exploitation are, as a rule, engineered only by the directors and higher officials of the corporation. Yet their ill influence does not stop there. The organization whose leading officers are corrupt will very likely suffer as well from the petty abuses of subordinate officers, and from these on lower in the ranks until the entire organization, permeated with the virus of personal greed, shows in its acts scant respect for whatever belongs to "the Company."

It is not by any means to be assumed that such conditions prevail invariably among corporations, since the standards of integrity and loyal devotion to the firm's interests which are ruling in many prominent corporations are no doubt considerably higher than the average maintained by proprietorships or partnerships. Yet when these conditions do prevail—and such is not infrequent—the corporation faces a more or less precarious situation: The incentives for its executives upon which it depends for efficient direction have their influence lessened if not entirely overridden by these opposed incentives inherent in exploitation. The effect inevitably, whatever be the degree to which this diversion of interests takes place, is to lower the corporation's standard of performance.[1]

[1] Says Lough: "The history of many of the large industrials and of some of the large railroad combinations does not support the notion prevalent some years ago that combinations necessarily achieve economies and improvements in management. On the contrary, the general impression which to-day prevails among conservative bankers and investors is that most combinations suffer from recklessness and inefficiency of management." *Loc. cit.*, p. 289.

Viewed from the behavioristic standpoint nothing is more fundamental to the executive than an abiding interest in his work. The average man only at rare intervals when under the required stimulus rises to his full capacity, from which, as a rule, he descends quickly to his usual level of accomplishment. Yet the heights of activity thus momentarily attained are as an inspiring vista of what the self should be, and the attainment of the higher level permanently constitutes a very practical problem which the business man may solve for himself.[1] At any rate, executives of the first rank, those captains of industry whose forcefulness is continuous, apparently are able to find in the day's work a never-ceasing inspiration.[2] The explanation, it appears, is simply concentrated interest. Not a few, however, perhaps it would not be an exaggeration to say a majority of business men, are bored by their activities; they are by no means exerting themselves to the utmost, they have little concern over the opportunities available for training themselves in order to increase their value to the company and they close their desks at night with a feeling of relief. It is a corporation's problem to rouse these men in some way, making sure at the same time that the

[1] *Cf.* Gowin, *The Executive and His Control of Men*, Chaps. IV–V.

[2] A correspondent thus relates an incident of his call upon J. Ogden Armour, President of Armour and Company: "Do you think I would work here nine hours a day and carry the burden of this business the other fifteen, for the sake of a few more dollars? Never! The money would not be worth it! There are other ways in which I could make it more easily, with less criticism. I do it because I have to do it. I do it because I love my men and because *my job is the biggest thing I know.*" *American Magazine*, February, 1917.

This attitude so well expressed by Mr. Armour's concluding phrase is commented upon by Mr. Schwab, of the Bethlehem Steel Corporation: "For thirty-six years I have been moving among workmen in what is now the biggest of American industries, the steel business. In that time it has been my good fortune to watch most of the present leaders rise from the ranks, ascend step by step to places of power. These men, I am convinced, are not natural prodigies. They won out by using normal brains to think beyond their manifest daily duty." *Ibid.*, *Succeeding with What You Have.* pp. 5–6.

incentives employed will lead to activity favorable, rather than opposed, to the best interests of the organization. The present chapter is to consider certain of the methods available for this purpose.

The incentive which naturally comes first to mind is salary or, more broadly considered, rewards of a pecuniary sort. The corporation because it has as a rule in comparison with other forms of ownership an immensely broadened base can rear places of managerial influence extended in scope and to those who occupy them quite stimulating in their eminence. In other words, the corporation as a large-scale enterprise makes possible a specialization in the management, and to these specialized positions, because their influence is so extended, handsome remunerations may be attached. Hence we hear of chairmen of the boards or presidents receiving salaries of perhaps $50,000, $75,000, $100,000, or even more. It is popularly supposed that such sums are the result of influence, the assumption being that no one could possibly earn so much. However, the $100,000 chairman of the board of directors may be at that most reasonably paid so far as the matter of comparative costs is concerned, in fact, to put the matter differently, of all the corporation's employees he may be its best bargain. The various instruments of production employed by an establishment for the purpose of achieving profit—land, labor, capital and management, to use the economist's terms—are always being balanced against each other, those responsible for the conduct of the business being anxious to strike the most effective combination and alert to make whatever substitutions will further this end. The $100,000 executive is engaged, it being assumed that the management is honestly seeking the best interests of the company, because the directors are convinced that the amount could not in other ways be expended more productively.[1]

[1] The statement of Theodore Vail, President of the American Telephone

It is easy to see from the nature of the contribution made by the executive that numerous inaccuracies are possible in any attempt to estimate in terms of compensation the value of his services. The amount of physical effort expended, the old test adopted by managers in rating laborers and occasionally employed with little thought but most amusing results in rating executives, breaks down absolutely.[1] The executive who is overly busy advertises in this

and Telegraph Company, is *à propos*: "Why do employers pay a man a big salary? Because he can earn it; and he must show before he gets it that he can earn it; if he cannot earn it after all, he cannot hold this position against one who can. A company or employer engages a man not only to earn his own salary and his own expenses, but to earn a margin over and above. The earnings of an employee must contribute its share to the payment of the interest on capital employed in the business, the maintenance and upkeep of the plant, and the many other expenses connected with a growing enterprise, and also show a little profit for the man or concern employing him. Without this profit there would be no business." *American Magazine*, January, 1917.

This statement of Mr. Vail's could be rendered somewhat more accurate by taking into consideration the curve shown on page 24. An executive may at certain periods in his career with the corporation receive more than he earns, and represent upon the whole a good investment notwithstanding.

[1] It is stated that the late James J. Hill was irritated by the habit which the general counsel of the Great Northern, a high salaried man, had of reading fiction during business hours. Finally one day he brusquely asked the lawyer why he did not "get busy."

"You do not pay me to keep busy, do you?" blandly inquired the general counsel.

Mr. Hill abruptly left the room and the counsel was not again troubled.

The President of the Illinois Manufacturing Association, Mr. Hastings, tells of a stockholder who from his own office window, seeing a department manager of the Standard Oil Company, a man who was drawing a five-figured salary, standing with his hands in his pockets gazing out upon the street, day after day, finally felt it is duty to notify the acting head of the company about it.

The official merely smiled: "Mr. Jones," he finally replied, addressing the stockholder, "I sincerely thank you for the interest you have shown in the maintenance of our efficiency. I appreciate the fact that, from your window, Mr. Smith appears every bit as idle as you say.

"But from your window it is impossible for you to see what is going on inside of Mr. Smith's head. My experience with Mr. Smith has been such that I know it would be highly profitable to this company to hire a dozen other similar Smiths if we could get them and pay them similarly large salaries to stand with their hands in their pockets, looking out of their windows and thinking thoughts as valuable as those which Mr. Smith thinks and crystallizes." *System*, September, 1917, p. 305.

way his adherence to routine, with a consequent incapacity on his part for the creative effort requisite for promotion to a position of really large responsibility. It has even been suggested in all seriousness by the president of the Illinois Manufacturers' Association, Mr. Samuel M. Hastings, that men who aspire to the highest positions and wish to become potentially equipped for such positions should be encouraged by the management to cultivate the fine art of "loafing." [1] Doubtless Mr. Hastings intends by the use of this phrase to emphasize the rôle of constructive thought, the value of the processes taking place within the mind whatever be the appearance of inaction presented to the casual observer. Evidently we have here a process difficult to measure, and accurately recompense.[2]

It is the function of accounting, as defined by Professor Wildman of New York University, to present comprehensive information concerning the financial status and operations so that the information may be used as a basis for administration; and it is the opinion of this authority, furthermore, that business men at present obtain from accounting only ten per cent approximately of what it holds for them. The recent advance made in the science of cost accounting by two industrial engineers, Nicholos T. Ficker and Henry L. Gantt, working independently,[3] indicates how the field of management is to be enriched with the gradual decrease of this now unused ninety per cent.

[1] *System*, September, 1917, p. 305.

[2] *Cf.* "A Man's Worth to a Business," an editorial in *Printers' Ink*, February 3, 1916, pp. 115–116.

[3] *Cf.* N. T. Ficker, "Shop Expense Analysis and Control" (New York: *The Engineering Magazine*, 1917); and H. L. Gantt, "Productive Capacity a Measure of Value of an Industrial Property," *The American Society of Mechanical Engineers*, December, 1916. The latter paper has been followed particularly in the above discussion. My attention was first drawn to the particular point under discussion by the reading of Mr. Ficker's articles on "Distributing Overhead Expenses" which appeared in the *Engineering Magazine* serially, June, 1915, to June, 1916. *Cf.* 49:321-326, 553–9, 690–697, 862–871; and 50: 58–64, 254–261, 390–400, 532–539.

These two engineers have pointed out that the cost of an article consists of

(a) all the expense incurred in producing it, whether such expense actually contributed to the desired end or not, or

(b) only those expenses actually needed for its production, any other expenses incurred for any reason whatever being charged to some other account,

depending upon which theory of costs was accepted. When plants are operated at full capacity, both systems give the same cost. But let production fall off, the overhead, which necessarily will not decline as rapidly as the decrease in production, when apportioned according to the first system raises the unit cost of the article produced. Were this process to continue, it is conceivable that the enterprise would become after a time such a high-cost producer that sales could with difficulty be made at any profit whatever. Under the second system of arriving at costs, however, the expense incurred by that part of the plant which is idle is carried to a separate account and there deducted from the profits, which results in leaving that part of the plant which is in operation charged with no greater unit cost than formerly.

The second system, since it directs attention to the real source of the difficulty, exercises a positive influence upon the management. The foreman operating in the department which throughout has been busily engaged is not disturbed over discussions of rising costs which do not concern him nor are the salesmen confused over the price lists settled upon by the sales department. What does take place is intense activity concerning the reason for the decreased output and the means for once more bringing the plant into full operation, because the expense of idle machinery has indicated the expense of inefficient management. While this test of the management is at present little more than a rough indication, the cost system itself

under continual development will become more accurate, when dealing with results secured by various executives, in separating those expenses which contributed to the desired result from those which did not so contribute.

Inasmuch as corporations under the systems of accounting which have been available (the advance in the science of cost accounting just mentioned not being included) are attaining in large numbers an accuracy of operation which a few years since was attained by none, it is to be expected that when this additional ninety per cent of service specified by Professor Wildman as now unused, plus the improvements in technique certain to take place within the next few years, are put into operation, the determination of the executive's contribution and the adjustment of his rewards accordingly will attain the precision much to be desired for purposes of scientific management.[1]

It is believed that this increasing definiteness with which is measured an executive's contribution to the company welfare will mark in a rough way the more widespread adoption of a certain method of remuneration already employed with beneficial results by a number of corporations, viz., the bonus system. The straight salary, either with regular or special increases, assumes that the executive is satis-

[1] Very often a candidate's record stated by himself reduces itself to words somewhat or follows: "The year before I took charge as sales manager sales were $100,000; at the end of my first year I had them up to $150,000, and within three years I pushed them across the $300,000 line. I am accordingly ready for a larger place and shall consider a salary of $8,000." One's irritation over the naïve assumption concerning the cause of the $200,000 increase will be tempered should he conceive clearly the candidate's very real difficulty in presenting evidence concerning which there is no question.

Various railroad companies have been securing data which in a rough way measures the performance of their executives through computing the cost of superintendence reduced to units of train miles and locomotive miles, of transportation. Such data are stated in terms of convenient and common measures of transportation, and can be employed for purposes both of record and comparison. This can be taken as a partial solution of the problem, touched upon in several plans in this study, of how to secure accurate data concerning an executive's accomplishment.

factorily compensated and that he will forthwith exert himself in the company's behalf to the best of his ability. In practice, the correspondence between salary received and services rendered is frequently not at all close, some executives being as grossly underpaid as others within the same organization are overpaid. Moreover, the desire on the part of executives to increase their earnings, something most commendable in itself, as a rule under the salary method of payment leads to jealousies and to intrigues oftentimes more worthy of a Machiavelli than an American business man. That the straight salary method has in it something of the questionable seems to be indicated by the secrecy with which its rewards to individual members are usually kept guarded. A further criticism is that whereas the salary remains set for a certain period, commonly a year, human nature has been developed in an environment where the connection between deed and reward is far more immediate, there remaining in most men, perhaps unfortunately, the desire for immediate gratifications and the estimation of future goods under terms of high discount. The bonus system, it appears, affords here an admirable solution. Moreover, the salary plan is far less flexible as compared with the bonus system in effecting the reduction in remuneration which a lessened productivity warrants.

The bonus system in its application is, of course, subject to innumerable modifications. While this renders it impossible without a knowledge of specific conditions to designate the particular provisions which a certain company might admirably incorporate into its plan, this is an advantage rather than otherwise since it indicates the system's extreme flexibility. We may venture to suggest three principles, however, which it is believed may be borne in mind profitably when applying the bonus plan to the remuneration of executives:

A stated salary. It does not seem desirable to have all

returns left indefinite as would obtain were the bonus the only form of remuneration. A stated salary, preferably one relatively small in amount since it constitutes but a single source of the remuneration to be expected, serves as a sort of desired security.

A standard of performance. The setting of this standard is a task which concerns the vitals of the bonus plan of payment. It may possibly be under the present unsystematic methods of measuring an executive's contribution that the process of setting this standard will be attended with much of the same intriguing which now characterizes salary fixing. But, as has been pointed out on a preceding page, these methods are steadily becoming more precise; and the plan here commended will stimulate strongly their further improvement since here the viewpoint from the first is that of objective evidence concerning performance.

A bonus for attaining or surpassing the standard. The bonus may be a set amount or a set percentage, or a percentage graduated according to degrees of successful performance. The much-discussed profit-sharing system, it is evident, can be regarded as a phase of the bonus plan, the sum shared being almost invariably either a set amount or a set percentage of the profits for a given period, commonly a year. Inasmuch as it seems advisable to make the standard of performance one which is distinctly attainable, rather than a goal reserved for the ideal executive when such shall appear, it follows that practically every competent official will be a bonus winner.

The Carnegie Steel Company deserves mention as the first large-scale enterprise to employ such a bonus system with conspicuous success in the development of executives. Mr. Carnegie thus describes the plan adopted.[1] "Speaking from experience, we had not gone very far in manufacturing

[1] Andrew Carnegie, "The Organization of Manufacturing industries," *The Making of America* (edited by Robert M. La Follette, Chicago: The Making of America Co., 1906), III, 273–276 *passim*.

before discovering that perfect management in every department was needed, and that this depended upon the men in charge. Thus began the practice of interesting the young geniuses around us, as they proved their ability to achieve unusual results—the source of big dividends. These received small percentages in the firm, which were credited to them at the actual cash invested, no charge being made for good will. Upon this they were charged interest, and the surplus earned each year beyond this was credit to their account. By the terms of the agreement three-quarters of their colleagues had the right to cancel it, paying the party the sum then to his credit. This provision was meant to meet possible extreme cases of incompatibility of temper, or if the recipient should prove incapable of development, or of enduring prosperity. At death the interest reverted to the firm at its book value. The young men were not permitted to assume any financial obligation, and not until their share was fully paid by the profits, and there was no further liability upon it, was it transferred to them. Thus thoughts of possible loss never prevented concentration upon their daily duties. They were not absorbed in the daily quotations, for the shares were not upon the stock exchange or transferable. This policy resulted in making some forty odd young partners, a number which was increased at the beginning of each year. . . .

"Men having others under their charge were given an interest in the proceeds, or savings in cost, in their department. Where it was impossible to decide the limits of a department, the managers were rewarded by handsome bonuses beyond their salary, based upon the general profits of the year. Thus, as a rule, every man in authority became more than a mere wage earner. He felt himself on the first step of the ladder which led to partnership sooner or later, and was worth any two mere employees paid only daily or monthly wage and denied special recognition. . . .

"The great secret of success in business of all kinds, and especially in manufacturing, where a small saving in each process means fortune, is a liberal division of profits among the men who help to make them, and the wider distribution the better."

The bonus system which has been outlined above possesses a flexibility sufficient to permit of its application under somewhat widely varying conditions, the experience of steel mills, department stores, chain stores, and other organizations which have introduced it seeming to indicate that satisfactory results are less dependent upon the particular type of business than the skill with which its incentive power in any given case is applied. Upon the whole, this method for the remuneration of executives has much to commend it and the prospects are in favor of its extension.

The plan of remuneration, whatever be the particular form devised in a given corporation, should at least correlate with fair flexibility the executive's productivity and compensation. The effect of such correlation is to stimulate positively two qualities with which, when they are combined, the gaining of profits so intimately depends, viz., initiative and sound judgment, since this correlation permits men within the corporation to a certain degree to back their ideas with funds of their own. Thought and action of a high order yield increased returns, errors and miscalculations their less desired though equally certain consequence. In other words, a properly devised system of remuneration will go far in cultivating within the corporation the same qualities of alertness and prudence which characterize a successful executive in business for himself.

The corporation's directors in the discussion of remuneration run the risk always of over-emphasizing what is at most but one factor in the reward secured by an executive, even though it be granted that as a rule the money returns do constitute the chief factor. In the last analysis, incen-

tives are a thing of the mind and not material. Accordingly, the executive may value his salary returns largely as tangible evidence of personal fitness, the ability to play the business game in a masterly way; [1] and he with good reason perhaps will see fit to respond readier to certain incentives into which the pecuniary element does not enter. It is a very common human trait that titles, ribbons, banners, gold lace, watch fobs, and engraved parchments possess a considerable incentive power, when properly bestowed. The practical conclusion to be drawn from considerations such as these is that with most corporations the variety of incentives afforded could with good effect be broadened.

[1] The experience of three officials, each well recognized in his field, merits brief statement since it indicates how under different conditions essentially the same principles operate:

"When I took hold of Bethlehem the second time," said Mr. Schwab in commenting upon a certain policy he had found effective, "I didn't take one well-known steel man from anywhere. I selected fifteen young men right out of the mill and made them my partners. . . . If you want anything well done in life don't engage a man of great reputation to do it, get a man who has his reputation to make; he will give you his best individual, undivided effort. Of the fifteen I selected not one has prove a failure. I am proud of that and proud of them." *Leslie's*, August 17, 1916.

Upon being asked how he developed men J. Ogden Armour replied, "Why, they developed themselves. I gave them a free rope and a long one. If they were too small for their jobs they got tangled up in the rope and it tripped them. If they were too big, they fashioned the rope into a ladder and climbed higher.

"If I don't trust a man I don't give him responsibility," he went on. "If I do trust him I let him alone. I want my men to think for themselves. I want them to come to me with a decision, not for a decision. I expect them to handle their jobs as they see fit, knowing they will have to answer to me only for results. . . . Our superintendents and foremen deal with the men under them in the same spirit." *American Magazine*, February, 1917.

The J. C. Penney Company's chain of Golden Rule Stores during the past fifteen years increased its branches from one store to 125 and its volume of annual business from $29,000 to $6,000,000. Moreover, unlike the situation prevailing among other chain stores, the better merchants its men become the more likely they are to remain. This is due to a particular opportunity afforded by the endless chain method of establishing new stores. When a man has shown himself qualified, he is made a manager, and it is then his privilege to acquire a part interest in a new store to be opened as soon as he himself has trained a new man competent to manage it. This process may be repeated indefinitely. All managers are thus partners and all seek men whom they can train to become managers.

The means for carrying out such a policy of increasing the variety of incentives are so very numerous that a discussion of them in detail is not possible here.[1] It suffices to say that, regardless of the explanation, with which as a rule they do not concern themselves overmuch, those responsible for the managerial policies of our leading corporations have come to recognize the incentive value of items such as quotas, contests, commendations in the house organ, stock ownerships, individual responsibility, and the staff idea in management. Such things do enable an executive to demonstrate his capacity tangibly before others, and himself as well.

An executive working under conditions such as we have described learns necessarily that business is not the sordid occupation pictured and that he himself in the prosecution of business success may cultivate that fine flavor permeating true craftsmanship the world over, idealism. It is this conception of the day's work which gives it significance; the radiator manufacturer impresses upon his men that they are not engaged in the construction of mere cold things of iron, but are producers of a service which cheers millions of homes; the machinery establishment see in its products labor saving and food multiplying devices able to free mankind from drudgery and wring untold wealth from Nature; and the meat packer, as his salesmen depart with their well-filled sample cases, quite properly regards them as missionaries bringing glad tidings of good food to all who will listen. This idea will appear overdrawn only to those who do not know business as it is conducted to-day.

In the early period of their formation, while attempting to effect the various economies claimed for them, the large combinations of capital popularly known as "trusts" doubtless on account of a certain ruthlessness of method did deserve at times the sobriquet of soulless corporations.

[1] *Cf.* Gowin, *loc. cit.*, Part II.

The field of business is not won without a struggle and to judge by the number of dividends passed and receiverships encountered, these early combinations were often hard put to it. Yet inasmuch as this creature without a soul could scarcely expect less than the thinly veiled hostility of the public and the mercenary indifference of its customers and employees, the corporation began to cultivate the kindlier qualities, in the end finding its soul and a profitable business as well. The demonstration was conclusive that business is not entirely to be divorced from sentiment save at the cost of efficiency, but that as a practical means of accomplishing the end sought, a profit-making business combination, there is need for *esprit de corps*.[1] So far as the executives are concerned, their best work becomes possible when they feel an enthusiastic devotion toward their corporation, a matter of the heart.

Since this cultivation of *esprit de corps* is found to be a

[1] It is significant that managers of first rank are to-day placing an emphasis upon certain qualities in a way which would sound somewhat strange in the trust magnate of twenty years since. *Esprit de corps*, coöperation, is the keynote.

Declares Schwab: "The real test of business greatness is in giving opportunity to others. Many business men fail in this because they are thinking only of personal glory."

Says Vanderlip in telling how he picks a $25,000 a year man: "He must be a good team worker—this is very important. He must be more concerned in getting a thing done than in getting credit for it. He must not be overconcerned about advancement.

"Before I select a man for a responsible position I take special pains to make sure that he will work harmoniously, because the effectiveness of an organization does not depend solely on the brains in it but rather on the brains being coördinated, on everybody pulling together. This demands a measure of unselfishness."

In bidding good-bye to an employee about to start for an important post in South America where pioneer financial work is being done to extend America's foreign trade, Mr. Vanderlip said: "I hope you have been long enough with us to imbibe the spirit of our organization and to learn what we are striving to do. The spirit of our organization is the most important and valuable thing about it, our best asset. Go forth animated by it. Keep our aim always in view, and success, I have no doubt, will go with you. Good-bye, good health and good luck."

The fact that statements such as these arouse no special comment indicates in itself how fully humanized large organizations are coming to be.

valuable supplement to the stimulus derived from the other sources above mentioned, we may now inquire concerning the adequacy as a whole of the corporation's supply of incentives. What has it legitimately to offer its executives?

It affords for one thing, a connection with a large-scale enterprise, a company which as a rule is well known with a line of products nationally advertised. The feeling of pride which wells up within the executive as he partakes of this prestige—the announcement of his connection, the sight of the company's full-page advertisements as he looks through some popular magazine or its bill boards along the road when he motors through an adjoining state, the conception which quite overwhelms him when in pensive mood he thinks of its immense service in binding together harmoniously the interests of a vast body of stockholders, employees, and customers—constitutes a very real incentive, which the large corporation is peculiarly fitted to give.

To enter into the vitals of this large-scale enterprise is to the man possessed of business instinct quite as fascinating as the search for an El Dorado proved in the case of our early explorers. This the corporation permits. Simply because it has passed the one-man stage and must disclose its plans since many men necessarily are required to carry them out, the corporation adopts a non-secrecy policy strongly in contrast to the narrower views of men at the helm of small projects. Although it perhaps seems a paradox yet in the main it is literally true that the business concerns most secretive are those whose policies are least valuable. The corporation, due to its policy of openness in information and because its operations as a whole comprise the materials of a liberal education, possesses in the knowledge of its business afforded the executive a second incentive worthy of note.[1]

[1] A minor clerk in the office of the Standard Oil Company was once called upon by a stenographer to read certain proofs. The corporation about this

It is reported that when John Wanamaker was getting started in Philadelphia, at least a dozen of his employees were drawing much larger incomes from the business than was the proprietor himself. This merely illustrates the fact that executives of exceptional ability prefer, other things being equal, to go with concerns in which they themselves have a financial interest in the business.[1] With the single proprietorship form of ownership such is impossible and under the partnership form, owing to the several conditions inherent in this form of ownership, it is usually in the case of large-scale enterprises not feasible. The corporate form in such cases possesses distinct advantages in satisfying an executive's desire for ownership in his company, its issues of stocks and bonds providing for a considerable variety in the degree of control, return, and risk incurred. Under special cases in which a plant manager or a division sales manager desires to acquire a stock interest in that part only under his personal direction, there can readily be formed a subsidiary corporation.[2] Needless to say, there is nothing illegitimate in the executive's purchase of his corporation's securities when they are low in price nor in parting with his holdings later should it appear feasible, a process distinct from the stock market manipulation above mentioned.

In the operation of a large-scale enterprise an organization is requisite, which from the standpoint of incentives

time was laying plans to extend its business into the Far East, and one of its representatives was sending from India long letters describing conditions and prospects there. Copies of the letters were being prepared for the use of the directors, and it was with this proof reading that young Bedford was entrusted. This opened up a new vista. The possibilities of this business with which he had become connected fired his imagination; it impressed him as a something big enough for any man to tackle, and he proceeded to do so. Doubtless this incident by no means accounts fully for the rise of A. C. Bedford to the chairmanship of the board of directors of the Standard Oil Company of New Jersey, but at least it was a significant step. It seems clear, moreover, that this incident in one important respect is typical of all corporations; they have vast projects under way.

[1] Lough, *Business Finance*, p. 14.

[2] Lough, *ibid.*, p. 53.

means that there are numerous positions well remunerated and possessed of appropriate titles. We have already had occasion to refer to the remuneration but it must be considered that the attainment of a titled position is to the executive an incentive as well. Though he may never attain to the general managership at $75,000 per year, the vice presidency at $50,000 or similar places afforded by every large organization, the department head at least feels himself in constant nearness to such prizes.

Is he advancing toward them, does his work mean to him continual growth? Upon this point the corporation has a somewhat unenviable history to live down. Its critics in the past have pointed out that upon the making of a connection with a large-scale enterprise a man sacrificed his initiative and, lost in its vast organization, became henceforth but a mere cog. Young men were warned to connect themselves with smaller organizations, where they could learn the business under the direction of officers who took a personal interest in them, and afterwards they could make satisfactory connections with the large corporation because the latter, since its own employees were only narrow specialists, were forced continually to go outside its ranks when well-rounded men were wanted for executive positions. These warnings still persist. Unfortunately from the standpoint of the corporation's welfare there has been, and is, much truth in these criticisms.

Nevertheless, it appears from what has been said in preceding chapters that corporations are coming to appreciate the significance of this problem and that they are beginning to devise means appropriate for its solution.[1] While the detailed program cannot be said as yet to be installed and in active operation, it does appear that the viewpoint of our corporation leaders is correct and it seems reasonable to believe that, whereas man-building in itself is an indirect

[1] *Cf.* Chap. X especially.

activity, the average corporation before long will have found its connection with profits to be vital and its exercise an agreeable function in the great drama of business.[1] When this point has been reached, young men of promise may be expected to prefer the connection with a large organization on the ground that it affords superior opportunities in the way of personal development and consequent promotion.

The foregoing list, while not exhaustive, indicates that the corporation in its relations with its executives possesses certain important incentives, a variety of appeals able when

[1] Upon being asked by an interviewer, "Looking back, what gives you the greatest satisfaction in your whole life's work?" Judge Gary of the United States Steel Corporation replied: "If I were to point to just one thing, I would say it has been securing the friendship and confidence of the large majority of our great family of employees. Yes," nodded the Judge, more to himself than to his questioner, "that has been most worth while achieving. That yields more real satisfaction than anything else in my life." "And what would you name next?" was asked.

"Assisting to bring about a friendly and coöperative spirit amongst the iron and steel fraternity, for this has resulted in eliminating the old methods of unreasonable and destructive competition which not only did so much to demoralize the steel business in times of depression and to drive into bankruptcy many connected with it, but periodically had a disastrous effect upon the general business of the country, to say nothing of the hardships and idleness it brought upon the workmen." *Leslie's*, July 27, 1916.

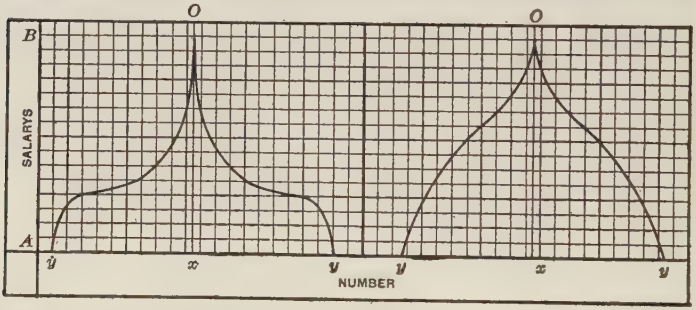
One of these was an internal problem, one an external; both concerned human nature and its development.

Says Luke C. Bradley of the Stone and Webster Engineering Corporation: "No organization should lose sight of the fact that its success and prosperity is due to the work of its combined forces, and no man in its employ who has risen in any degree whatsoever above the ranks should be too unimportant to have his growth and development followed with careful and individual concern. The employee may not know that his natural talent is being studied; that his character is being developed; that his training is being systematically carried on by advice, counsel, or by direction. He only knows that, as he bceomes qualified, the position of greater responsibility awaits him; that as more responsibilities fall upon him, greater avenues will open for him to become acquainted with the manner in which to meet such responsibilities; that as the time arrives when he has exhausted the possibilities of the line of work in which he is engaged, he may many times, without previous request, be transferred to other work, opening up possibilities for a new development.

"He further knows that so long as he is ambitious to advance he need not worry about his position and thus he has that peace of mind which is the best environment for the growth of ideas." *Factory*, April, 1917.

properly applied to stimulate the mind with reasonable completeness and continuity.

It is true that not all its men will respond to these incentives, some preferring to maintain the even tenor of their



FIGS. 15 and 16.—Two organizations are here contrasted with respect to the number of positions available (measured by the length of the line *xy* as it rises from the base line toward *o*) at the various salary ranks (from the lowest paid employee at *A* to the highest paid at *B*). Such a diagram can be prepared from any firm's payroll data and serves a useful purpose in determining to what extent there is "always room at the top." A large bakery selling its product in bulk to distributors has an organization somewhat like Figure 15, a manufacturer of electrical equipment who undertakes direct-to-consumer distribution one roughly represented by Figure 16.

way regardless of stock bonuses, the example of fellow officers, advancement, and the like. Nevertheless it is also true that through the agencies of selection and training, men can be secured who will respond, and respond heartily, to these same appeals. The degree to which this latter policy should be vigorously prosecuted depends considerably upon the conditions within the organization. So far as the supply of incentives is concerned, organizations fall roughly into two groups, with innumerable graduations between. (See Figures 15 and 16.) One, possibly due to its rapid growth or fluctuating nature of its business or unsystematized conditions of its organization, needs men constantly for its higher ranks, and its program of training and incentives operates

under forced pressure. The other, owing to dissimilar conditions, affords relatively few incentives, and the management in corporations of this class at times is found fearful lest the men discover this fact or adverse to a training program because it may lead those taught to demand more remuneration. The difficulty here encountered arises chiefly from a misconception of the purpose of selection, particularly from a confusion of the two terms, "best candidate" and "best candidate for our organization."

The problem which faces the corporation after its management has surveyed its various incentives is most practical and vital: With the supply of incentives possessed how secure in their distribution the maximum in good service for itself? The solution of a question such as this demands master craftmanship. The boards of directors upon whom the solution primarily depends are to quote an authority,[1] "likely to become mere appendages or echoes of some one or two individuals who actually direct the corporation. The real, final authority is frequently lodged in the president, if he is an active man and performs all the duties of his office, and the board of directors simply ratifies his decisions. This is frequently the case even though the directorates may be made up of able forceful men. Under the American system they have no direct interest, except as shareholders, in the profits of the corporation, and cannot afford to devote a great deal of time and thought to its activities. They have confidence, presumably, in the president or in the chief officer or officers, whoever they may be, and they prefer for their own convenience and comfort to leave the whole corporation in the care of its actual head. The thing that frequently happens, therefore, is that the shareholders elect directors; the directors elect a president or other chief officer; and this man designates the other officers, fixes the policy of the concern, and carries on all its affairs subject

[1] Lough, *loc. cit.*, pp. 37–78.

only to the formal ratification of his board. So long as the president and other officials are well chosen, the system works well. Its weakness lies in the fact that the directors themselves are poorly informed and are left in a helpless or ignorant condition as compared with the officers; hence they are quite unable to protect themselves or the corporation against practices on the part of the officers that are perhaps detrimental. In place of a representative democracy, which is the ideal form of government for a corporation, they substitute a small tyranny." It is under conditions such as this as a rule that the corporation's incentives are to be distributed.

In practice, consequently, instead of a distribution made solely in the interests of securing maximum good service for the corporation, a considerable variety of more or less devious practices occurs. Four of these, a list by no means exhaustive, of course, will be described briefly:

Promotion reasons. In the consolidation of several heretofore independent enterprises the question of creating a working organization for the new combination arises sooner or later. There are a number of officials in the subsidiary concerns who seek positions of greater power in the combination, often upon threat of withdrawal should their wishes not be granted. Since such withdrawal may threaten seriously the incorporation proposed, the promoter perhaps is forced to bargain for support by parceling out the various officerships of the new company to men whose chief merit lies in the ability to interest local capitalists or important stockholders. Under such conditions the officials of the newly organized company can scarcely be expected to measure up to the requirements of their respective positions and work together effectively within the organization.

The other alternative facing the promoter is, of course, to bring in as the chief official of the new company some man from the outside, to whom authority is given to select the

best man available. But since this method requires the promoter to appeal to capitalists interested primarily in sound business policies irrespective of personalities, it has been found in practice that with many consolidations the exigencies of the promoter have dictated "political" appointments. Needless to say, from the standpoint of management solely, the "spoils" system, whatever merits it may have possessed in facilitating a combination, does not represent a proper distribution of the corporation's incentives.[1]

Engagement of outsiders. The number of desirable executive positions, which the company properly regards as the basis of its supply of incentives, is commonly at best limited. Should a vacancy be filled by an outsider it decreases the number just so much, but far more important as a rule is its secondary influence, the suspicion engendered that try as one will opportunity for advancement does not here exist. The reason given for bringing in a man from the outside usually is that no one within the organization was qualified, or that jealousy would have been aroused were any one of several possible candidates selected, or merely that new blood was desirable. So far as the matter is one of securing a specialist the plea of no one qualified within the organization is doubtless sound, and possibly at times will hold true of other offices, yet as a rule this claim constitutes a reflection upon the corporation's methods of developing its men. Practically the same answer applies to the claim of jealousy and of new blood needed. In exceptional cases they are legitimate; otherwise not. Moreover, even in cases where the outsider is engaged it is oftentimes tactful to place him first with inconspicuous title where he may demonstrate before those otherwise disgruntled his possession and their lack of the qualities demanded by the position he eventually fills. The more progressive establishments, upon the whole,

[1] *Cf.* Lough, *loc. cit.*, pp. 270–271.

pretty generally observe the rule of promotion from within the ranks, the consequence being that the use of every means provided for increasing their capacity may be urged upon men in full sincerity.[1]

Personal and family influences. The attainment of high rank within the corporation presumably rests upon an executive's ability exercised in its benefit, which properly includes, of course, his success in coöperating with the other members of the organization in the furtherance of this common project. Unless this common project is thereby furthered, it does not include personal agreeableness at a director's whist table nor kinship to the president nor, through membership in divers cliques formed within the organization, an expertness in "log rolling." Yet what corporation can rightfully claim an organization free from things such as these? The author, at least, has yet to make its acquaintance. The usual practice is for an executive to "put his best foot forward," which means engaging shrewdly in whatever intrigues are afloat. It is not only in affairs of state that the diplomat maneuvers himself across the slippery field of politics into the high places.[2]

[1] In an after-dinner speech delivered before the managers, a sort of family gathering of the American Radiator Company's executives, President Wooley reiterated as follows the policy he had often mentioned before: "We must conserve ourselves, by inviting younger men into our ranks who can be educated to carry forward the work we are doing to-day. You, the General Executives, and you the Plant and Branch Managers, who occupy the leading positions in our Company, have spent the larger portions of your business lives in its services. It is your Company, in the highest and best sense, because you are masters of the business problems entrusted to your care and appreciate the beauty and significance of its influence upon the lives it touches. The welfare and comfort of 40,000 human beings are affected for good or ill, by the quality of service you render and the loyalty and devotion you evince.

"The men in the junior ranks shall some day take our places. We should never go outside of our own organization to find an executive. The juniors of to-day will be the executives of to-morrow. If each of you can educate his successor so that the pupil will measure up in efficiency and coöperative temperament to the level of your own accomplishment, the perpetuity and solid prosperity of our beloved Company is well assured."

[2] Nor is this practice confined to the large corporations, but will be found

The chief defect introduced into an organization when personal and family influences are allowed to prevail is that the executive's *raison être*, the service of his corporation, becomes subordinated to, or at least obscured by, various alien demands; it is through these, he learns, and not his direct furtherance of the company's affairs that incentives are distributed. While it possibly would appear a matter of small loss to bestow a vice presidency at $15,000 upon the president's son or a treasurership at $10,000 upon some incompetent department head whom the chairman of the board has found to be a most agreeable companion on the golf links and elsewhere, the argument being that the incumbent would at least earn part of the salary, the effect cannot be thus confined but has the tendency rather to be as an evil poison introduced into the organization's veins, numbing the enterprise of heretofore ambitious men wherever its influence permeates. From this broader yet more correct standpoint it had been less expensive oftentimes were the amount of the salary tendered such incumbent as a gift outright that the organization as a whole might be rid of him.[1]

flourishing in a high percentage of the small corporations with which one becomes thoroughly acquainted.

In discussing the practice of small corporations which make all its officers directors and allow their directors to make themselves officers, Lough points out, "It is, of course, quite proper and customary that some of the leading officials should be included in the directorate, but a directorate that is made up wholly of officers is obviously a body in which there is great danger of 'log rolling.' An officer who is also a director cannot easily afford to oppose fellow officers and directors who have complete power over him. If there are no outside directors who are not involved in the internal affairs of the corporation to whom he may appeal, an honest, zealous officer is peculiarly in a position of disadvantage. The custom of having all or nearly all of the directors chosen from the officers of the corporation may work well for temporary periods just as any other unsound arrangement may work for a time. It is, however, fundamentally incorrect and has many times proved a fruitful source of friction and inefficiency." *Ibid., loc. cit.*, pp. 39–40.

[1] The case of a certain corporation whose history is well known to the author may be cited. Under the guidance of two brothers the business had expanded from its original small Pittsburgh plant until it comprised eighteen flourishing establishments strategically located in various cities of the

Spectacular service. "All successful employers of labor," Mr. Schwab says,[1] "are seeking men who will do the unusual, men who think, men who attract attention by performing more than is expected of them. These men have no difficulty in making their worth felt. They stand out above their fellows until their superiors cannot fail to see them. . . . The man who attracts attention is the man who is thinking all the time and expressing himself in little ways. It is not the man who tries to dazzle his employers by doing the theatrical, the spectacular. The man who attempts this is bound to fail."

As the statement of a policy toward which corporations are moving this is admirable; as the description of the practice now employed by the average management in arriving at the value of the services performed by its respective executives the statement unfortunately does not satisfy.

East and Central States. The firm's policy was strictly one of promotion through merit, a policy which was extolled freely upon occasion but withal sincerely inasmuch as each of the various plant managers had risen from the ranks and the two brothers themselves as president and general manager respectively were regarded by the great body of employees as justifiably entitled to their positions. Owing to the nature of the business under consideration, there was need at the New York headquarters for very few officials outside of certain technical experts whom the firm quite properly made no attempt to develop within its ranks.

About this time the president died. The general manager, the lesser by considerable in ability, became president and thereupon promptly forced out the late president's two sons from certain minor positions which they held, installed his two sons as plant managers in vacancies created for them, following which, as soon as the stir created by this unusual procedure had had time to quiet down, he brought them to headquarters as Second Vice President and Assistant to the First Vice President. Thus, in a firm where the policy of "merit wins" was long successfully extolled, eighteen veterans of the organization saw within a few months almost a half of what to them were important incentives, the managerial positions at headquarters, passed out to two comparatively inexperienced young men. They were the president's sons!

The satisfaction in the way of social prestige which the new president's family now enjoys possibly outweighs the salaries drawn by the young men, rendering the action to them profitable. Yet from the corporation's standpoint the effect undoubtedly has been ill, more serious than were the salaries denoted the incumbents.

[1] *Succeeding With What You Have*, pp. 12, 25–26.

The modest man, he who thinks all the time and quietly lets his results speak for him, somehow or other in a large corporation runs a considerable danger of being overlooked; he experiences a real difficulty in making his worth felt and of being called to mind when advancements are made.

Hence the policy of self-advertisement which so frequently prevails among the officers of a corporation anxious for preferment. In view of its evident necessity perhaps it merits a certain indulgence. Yet one finds it hard to countenance at times the wholesale appropriation by some particular executive of whatever has been accomplished by several conscientious and hard working assistants, even the staff of an entire department; or the facility, to use a phrase which because of its frequent aptness has a wide currency in business, with which when errors have been committed he "passes the buck."

Whenever the corporation's supply of incentives is through the above and kindred methods carelessly, at times even dishonestly, distributed, its maximum power of appeal is lost and a certain set of evil consequences ensue, indifference, mutual suspicion, secrecy, the refusal to teach assistants, jealousy and intrigue. While these evils affect more or less all corporations, the period of their maximum influences, it is believed, has now safely been passed and the indications of to-day all forecast an equality of opportunity in which the ways shall be open, and in the open, along which the executive may advance until he becomes partaker of whatever share of his corporation's supply of incentives his capacity justifiably secures him.

Under conditions such as this, executives in a very real sense select themselves. While the positions within an organization are in a more or less formal way assigned duties and limits of authority, the men in charge, due to their search for conditions of maximum executive productivity, reshape these positions continually. By assuming charge of

new activities or reëmphasizing old activities, they determine in large measure for themselves the content of the position, however tardy be the formal recognition by an appointment or an appropriate name for the new department. The selection of an executive, therefore, is not properly to be regarded as an isolated phenomenon but one which enters into the warp and woof of the firm's entire activities. In consequence, the corporation which affords its executives a flexible organization within which to strive and an accurate appraisement of their productivity thereby insures its future as a going concern by the best of the various selection methods.

CHAPTER XII

The Policy Regarding Personnel

In the preceding chapter the more important problems involved in the selection, the training and the rewarding of corporation executives have been discussed in order. It now remains to describe briefly the means through which these three activities, which constitute a function whose importance to the organization none will deny, may be handled advantageously.

According to the practice now prevailing among corporations the supervision of the executive personnel, in so far as this is regarded as a distinct activity, very commonly devolves upon the president. Presidents are known who very properly regard it as their chief function to surround themselves with competent lieutenants and to secure from these men their very best. Sometimes the duty falls to the lot of the general manager, to become usually more or less an appendage to this official's already multiform responsibilities. At other times it is made, supposedly, the duty of every official including the directors, none of whom as a rule has any systematic plan of procedure but each doubtless ready to admit complacently that the matter receives excellent attention since it has the active interest of all.

It has become a well-accepted principle of management that efficient procedure is not attained without skillful planning; results, it is agreed, do not simply happen but in order that maximum returns be realized from a given expenditure the effort has to be directed systematically toward the attainment of a definite end. The corporation

itself, in fact, stands foremost as an exponent of organization and of standardization in its procedure. With respect to the development of its executive assets, however, the management of our corporations have in the past moved slowly because the problem appeared so indefinite that the expenditure of money upon such possibilities did not impress them favorably. The question is to what extent this policy should continue or be superseded by one more in keeping with the interests of the company.

In the development of executives into assets of value, six factors have been outlined in the preceding chapters:

The interview
Heredity
Physical condition
Mental qualities
Performance during training
Performance at work

Viewed from the standpoint of selection, are not these six means able to provide such an array of verifiable data that much more nearly correct causal connections than commonly attained can be established between man and position, which means, in other words, a higher degree of accuracy in the placing of executives? Viewed from the standpoint of training, do not these six also provide information of considerably increased definiteness for the determination of an executive's growth and the evaluation of the various agencies utilized in his development? Viewed from the standpoint of incentives, will not this same evidence lower the expense of management calculated on a unit basis while, in addition, the corporation secures from its executives a more complete utilization of the possibilities for profits than heretofore it has been able to attain?

Were these various measures to be considered in their mutual relations, in the light of the particular conditions existent within a given corporation, it is believed that the management would become convinced that the idea of indefiniteness need not deter their company's advance with

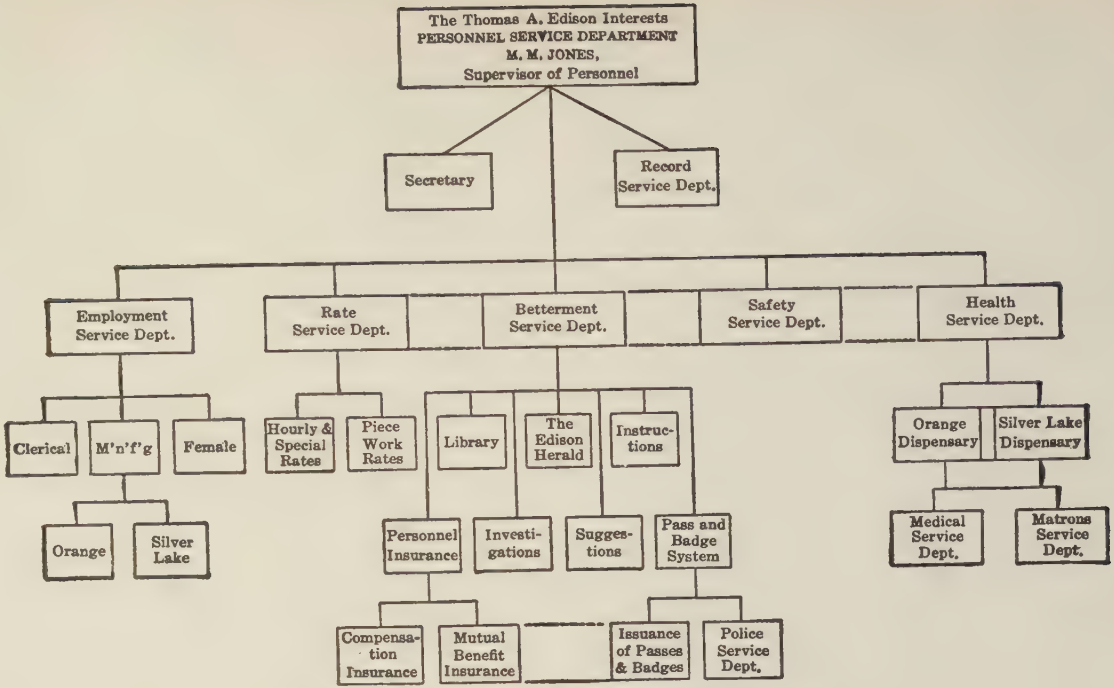


FIG. 17.—The Organization of a Personnel Department.

respect to the development of its executive assets. Were they so to agree, their general method of procedure becomes much the same as were it a problem of production, accounting, or sales. The selection, training and rewarding of executives is simply a profit-gaining opportunity, whose successful realization should be attempted through the agency of a well-conceived and comprehensive program. The evolving of such a program and the putting of it into effective operation requires an organization, which will now be indicated.

For some years past corporations have been instituting various departments having to do with personnel-employment departments, medical departments, mutual benefit associations, athletic associations, clubs, educational departments, and similar organizations. The point has been reached, it is believed, when these various departments ought to be brought into more intimate contact, under one head responsible in a general way for their combined activities. This result is on its way toward accomplishment in a considerable number of corporations, in none of which, so far as the author's knowledge extends, have the results to date been such that a return is contemplated to the former condition of personnel affairs and in several of which, to his personal knowledge, the results are already considered highly satisfactory.[1] However, such organizations almost exclusively as yet concern themselves with the rank and file.

A second development, which may well be undertaken simultaneously with the consolidation of the various personnel departments into one organization under a single head, consists in the gradual extension upward of this organization's activities until provision is made for all per-

[1] The personnel activities when first taken over into a separate department at the plant of Thomas A. Edison, Inc., included merely the hiring of employees for one division of the business. Owing to the satisfactory results attained, the activities of the personnel department have since expanded until they include the entire plant, as per the organization chart on page 213.

sons connected with the corporation. Needless to say, what provision be made would vary somewhat widely according to the needs of those for whom the service was rendered. Nor would such upward extension represent any radical departure from tendencies already in operation within our leading corporations. Some of the different personnel departments here and there as it is are concerning themselves with activities in which foremen, junior officers, department heads, and higher officials figure, in steadily diminishing degree, it is true as a rule, as the higher ranks are reached; but still the connections are being established. This process in the interests of effective results ought not to be unduly hastened since, as the preceding pages have indicated again and again, the selection, training and rewarding of executives remains as yet in many respects unstandardized, and time, plus much patient effort, will be required before the personnel program can be instituted in its entirety.

The official in charge of the activities above outlined will, it is here predicted, eventually rank as a vice president of the corporation. Nor will it in this case be merely an honorary title, but one earned because the activities under his charge are then perceived to bear the vital connection to the company's earning power which justifies the title, with all the emoluments pertaining thereto. For the time being, however, such official might well be termed Supervisor of Personnel, and made responsible directly to either the president or the general manager, depending upon the respective interests in personnel of each in any given organization.

The Supervisor of Personnel in coöperation with the employment manager, the educational director and other officials of the company will eventually be able to devise that comprehensive and interrelated program for selecting, training and rewarding executives which conditions within

his particular organization apparently warrant. Moreover, in his office can be centralized the records by means of which checks upon the various features of his program will be established. It is this last especially which will accelerate progress; there are numerous experiments concerning the problems of personnel now under way among our corporations, but due to the fact that these for the most part are of the trial-and-error sort with no records preserved, demonstrated progress is both halting and costly. The uniform record blanks and the information compiled thereon year after year ought, when studied by the experts of this centralized office, to increase the speed of progress while lessening its cost.

Under conditions such as we have outlined, the three processes of selection, training, and rewarding can be viewed as they should be in their intimately correlated relations. As illustrative of this close connection, the selection process provides men who are susceptible to training and who will respond to the supply of incentives available; the training program through its records of the progress made by the one instructed affords an additional means of selection and by its development of the individual insures his capacity for response to incentives; and incentives further check selection by recording the performance made under actual service and assist training through its stimulation of interest. To the corporation, in fact, these three in their various aspects are but phases of one process, the utilization of men in the fulfilment of its function as a business establishment.

In such utilization of men, the corporation, it is believed, should proceed upon the theory that, much as reliable and efficient workers are desired in the ranks, the executives nevertheless occupy the strategic positions and that their effectiveness in these positions, be its degree high or low, sets the company's pace as a going concern. Under the

conditions which exist, a policy of indifference toward these problems does not appear justifiable nor should effort in the direction of their solution be halted over the matter of costs because within every organization the selection, training and rewarding of executives goes on as it is, even if hastily done and strewn with errors, and its cost, however exorbitant, already is being met. In consequence the choice is presented of continuing the costly rule-of-thumb practice or of undertaking the matter systematically. The latter procedure is here commended as a plan capable of returning upon the expenditure required a percentage of profits well above that secured from the corporation's normal business operations.

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